

## NATIONAL INVENTORS HALL OF FAME FOUNDATION

### COLLEGIATE INVENTORS COMPETITION<sup>®</sup> ANNOUNCES WINNERS FOR 2007

*Student innovators receive cash prizes for their work, including CPR assistance, measuring pain medication effectiveness, improving cancer therapy,*

Pasadena, CA (November 2, 2007)—A novel way to treat cancer has won the top honor at the 2007 Collegiate Inventors Competition, an annual program of the National Inventors Hall of Fame Foundation. Ian Cheong of Johns Hopkins University was announced as the grand prize winner, receiving a \$25,000 prize, during a ceremony last night on the campus of the California Institute of Technology.

This year's winners also include John Dolan of the University of California, San Francisco in the graduate category for his work on the Dolognawmeter, a device to measure the effectiveness of painkillers, and Corey Centen and Nilesh Patel of McMaster University in the undergraduate category for their work on creating a CPR assist device. The McMaster team and Dolan each received a \$15,000 prize from the competition, which is sponsored by the United States Patent and Trademark Office (USPTO) and the Abbott Fund.

The finalists were scrutinized during an initial evaluation process by 30 experts from industry, government and academic research who judged entries on the originality of the idea and the potential value and usefulness of the invention to society. Then, on October 31<sup>st</sup>, the finalists presented their inventions to a final panel of eight judges, including six inductees from the National Inventors Hall of Fame and representatives from the USPTO and Abbott.

Jeffrey Dollinger, President of Invent Now, Inc., the subsidiary of the Hall of Fame that administers the Competition, noted, "One of our goals is to encourage college students to celebrate the role that the inventive process plays in their science and technology research, and this year's class of finalists represents the true spirit of invention in our society. We look forward to seeing the impact of their innovations as they progress in their careers."

The Hall of Fame inductee judges for this year's competition included Robert Bower (self-aligned gate MOSFET), Edith Flanigen (molecular sieves), Marcian "Ted" Hoff (microprocessor), Donald Keck (optical fiber), George Smith (charge-coupled device), and Rangaswamy Srinivasan (excimer laser surgery). This year's additional guest judges were Jasemine Chambers, Biotechnology Group Director for the USPTO and Jeffrey Pan, Advanced Technology, Global Pharmaceutical Discovery for Abbott.

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"At Abbott we are deeply committed to fostering the next generation of innovators," said Jeff Pan. "And as a scientist, I am encouraged by the depth of talent demonstrated this week in the competition. It is a thrill for me to serve a role in this important event."

"All of the Competition finalists have already contributed to making our world a better place," said Jon Dudas, Under Secretary of Intellectual Property and Director of the USPTO. "The hard work and ingenuity that they have demonstrated during this competition are truly exceptional, and I'm encouraged that this generation is making scientific advances like the ones we're celebrating."

Ian Cheong, 33, arrived at Johns Hopkins University from his native Singapore prepared to focus on cancer therapy. Drugs used in cancer treatment routinely kill the healthy cells as well as the cancer cells because they are potent but nonspecific. Cheong took on the task of finding a way to make the cancer drugs more specific. He injected bacterial spores into the subject which made their way to oxygen-poor areas within cancerous tumors. Then, Cheong put a cancer-fighting drug in lipid particles and injected those liposomes into a subject. The germinated bacterial spores also secrete a protein that makes liposomes fall apart when the drug-containing liposomes are in the proximity of the tumors, and the drug is released only in those specific areas. Cheong, originally educated as a lawyer, received his Ph.D. in cell and molecular medicine from Johns Hopkins and is currently working on postdoctoral research. His advisor, Bert Vogelstein, receives a \$15,000 prize.

John Dolan, 38, invented a device to measure the effectiveness of painkillers when tested in laboratory animals. Dolan was in dental school when he realized that many patients had oral and facial pain related to a variety of disorders. He also understood that finding ways to measure the effectiveness of painkillers on such pain had great importance. He created a device that could measure the gnawing function in experimental animals by taking advantage of their gnawing instinct. His Dolognawmeter automatically records the time it takes for a mouse to gnaw through a series of dowels. Slower gnawing shows greater pain, providing Dolan with a way to study the effectiveness of painkillers. Dolan, who attended high school in Bozeman, Montana, received his B.S. from Montana State University. His M.A. in anthropology was from the University of California, Berkeley. After spending several years as an artist, he attended the University of California, San Francisco and received his Ph.D., and is currently a student in the oral and craniofacial sciences there. His advisor, Brian Schmidt, receives a \$5,000 prize.

Corey Centen, 22, and Nilesh Patel, 21, are undergraduate prize winners for their CPRGlove: Wearable CPR Training, Testing and Assist Device. The pair was in their senior year when they were discussing ideas for a final project, and they realized that neither could remember how to do CPR even though both were trained in high school. Their research showed there was a need for

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a device to assist with CPR, and they created a custom-made glove with sensors and an LCD screen to give instructions and feedback when the user performs CPR. The glove is able to provide information on the rate, depth, force, and angle of compressions as well as the heart rate. It also speaks, providing verbal cues for the user. Along with a fellow electrical and biomedical engineering classmate from McMaster, they formed Atreo Medical, Inc. to refine and market the device. They have been pleased to receive support and funding for working on the glove from various Canadian sources, and they are making headway in the U.S. as well. Their advisor, Hubert de Bruin, receives a \$5,000 prize.

### **About Collegiate Inventors Competition**

The Collegiate Inventors Competition is designed to encourage college and graduate students to be active in science, engineering, mathematics, technology, and creative invention. This prestigious challenge recognizes and rewards the innovations, discoveries, and research by college and university students and their advisors for projects leading to inventions that may be patented. Introduced by the National Inventors Hall of Fame in 1990, the Collegiate Inventors Competition has annually rewarded individuals or teams for their innovative work and scientific achievement. For more information on the competition, visit [www.invent.org/collegiate](http://www.invent.org/collegiate). For more information on the National Inventors Hall of Fame Foundation, visit [www.invent.org](http://www.invent.org).

### **About Abbott Fund**

Abbott Fund is a philanthropic foundation established by Abbott, a global, diverse healthcare company, in 1951. The Fund's mission is to create healthier global communities. Abbott Fund invests in creative ideas that promote science, expand access to health care and strengthen communities worldwide. For more information on Abbott Fund, visit [www.abbottfund.org](http://www.abbottfund.org).

### **About United States Patent and Trademark Office**

For over 200 years, the basic role of the USPTO has remained the same: to promote the progress of science. Through the issuance of patents, the USPTO encourages technological advancement by providing incentives to invent, invest in, and disclose new technology worldwide. Through the registration of trademarks, the agency assists businesses in protecting their investments, promoting goods and services, and safeguarding consumers against confusion and deception in the marketplace. By disseminating both patent and trademark information, the USPTO promotes an understanding of intellectual property protection and facilitates the development and sharing of new technologies worldwide.