GAMERS FORECAST USE OF MOBILE DEVICES, SOCIAL NETWORKS AND ADVANCED DATA MINING TO ACCELERATE MEDICAL RESEARCH

-- Breakthroughs to Cures Gaming Event Generates Thousands of Ideas from Hundreds of Players Worldwide; Named among Top Ten Most Impactful Games of 2011 --

SARATOGA, Calif., January 31, 2011 – On October 7th, 2010 and November 9th, 2010, the Myelin Repair Foundation (MRF), a non-profit medical research foundation known for its pioneering Accelerated Research Collaboration™ (ARC™) model, hosted the **Breakthroughs to Cures** 'gaming event' www.breakthroughstocures.org. The event was a first-of-its-kind effort, leveraging the power of online game play to identify unexpected solutions for accelerating the pace of medical research and shorten the time to market for new medicines.

During the event, more than 400 players including medical professionals, students, academics, corporate executives and patients across five continents, were called upon to solve a fictitious public health crisis, where a widespread contamination infected approximately 100 million people in the United States. Participants viewed a short scenario video, before sharing a brief 140-character or less idea(s) about the future of medical innovation and research. These ideas spurred reactions and brainstorms, which generated more than 3,000 ideas. An executive summary and full report detailing the themes and key strategies that emerged from the Breathroughs to Cures can be found at (www.info.breakthroughstocures.org).

The overall success of the game at generating impactful ideas to improve medical research led *Games for Change*, the leading global organization for gaming, to name Breakthroughs to Cures among its top ten most socially impactful games of 2010.

The **Breakthroughs to Cures** game was developed in partnership with the Institute for the Future. The project was made possible through a grant from the Robert Wood Johnson Foundation's Pioneer Portfolio, which seeks ideas that break free of conventional thinking, often because they reframe and refocus problems and explore different paths to breakthroughs.

Myelin Repair Foundation founder and President Scott Johnson commented, "New ways to understand and address the barriers that stand in the way of delivering new medicines to patients is central to our work at the MRF. I am encouraged by the degree to which the players identified strategies that we already have in place. And I am inspired by how

candid the players were in generating ideas that were not only forward looking but could also hold great potential for changing the status quo."

"Because of *their ability* to actively engage and entertain, we have long believed digital games have the potential to become effective tools people of all ages can use to improve their health," said *Nancy Barrand, senior program officer at the Robert Wood Johnson Foundation's Pioneer Portfolio.* "Breakthroughs to Cures showed us that games can also be used to crowdsource unexpected ideas and help reframe pressing problems, demonstrating yet another way they can be used to improve health and health care."

In the game summary, prepared by the game developers and staff at the Institute for the Future, there were many strong ideas and findings, ranging from specific innovations in technology to ideas about how to facilitate social and cultural changes that could advance collaboration. The three solutions outlined below are representative of some of the findings and in some cases are currently being partially implemented by such organizations as PatientsLikeMe and 23andMe®..

Leverage mHealth Technologies to Bring Trials to the Patient
- The players suggested using mobile tools as a way to better health communication, including organized crowdsource approaches to the study of disease and its treatment. Specifically, the issue of very rapid, large-scale clinical trials was addressed with two main strategies: a mobile lab and mobile patients. Mobile labs sites, the use of Skype video, in-home tele-monitoring, and body sensors that automatically report back to centralized data repositories were among the ideas suggested. In addition, mobile health coaching could support clinical trials in a variety of ways, including real-time responses to in-home sensors.

Enable a Full Picture of Patient Health for Researchers
- While there is widespread agreement that health outcomes stem from a broad range of environmental, social and biological factors, health and medical researchers often lack access to anything but a small sliver of one of these data sets. Players saw opportunities in broadening social networks to capture data from across populations by demolishing the walls of traditional research silos and information – for instance bringing together clinical data, genomic information, and environmental health data. Game players suggested allowing individuals to contribute their own details in a "knowledge garden" – a global topic map online that enables people to draw links between data, concepts and ideas – a new medium to advance data mining and a way to unveil hidden contributing factors to disease progression and cure effectiveness.

Use Emerging Computer Analysis and Modeling Tools to Make Clinical Trials More Efficient
- Several players suggested using enhanced computational methods and analysis to identify potential patients to enroll in trials. Strides in technology and data transparency would open up opportunities to more effectively identify subpopulations and patients where specific treatments are expected to be successful. Opportunities could unfold to

design drug trials where the population is genetically unique, multiple promising drugs are used, and multiple legs are run simultaneously. The use of virtual panels could be the means to truly take advantage of the opportunity to draw conclusions from highly relevant sub-groups.

Interested parties can view more specific ideas around each of the themes/strategies above, as well as other notable ideas around shifting incentives, creating reputation communities to further research collaboration, empowering the DIY/biology hobbyist community, etc at www.breakthroughstocures.org

About the Myelin Repair Foundation
The Myelin Repair Foundation (MRF) -http://www.myelinrepair.org -is a Northern California-based, non-profit organization focused on demonstrating a new model for medical research and drug development that shortens the time to market for treatments and cures for all diseases. Their proof of concept project is on developing myelin repair treatments for multiple sclerosis.

About the Robert Wood Johnson Foundation and the Pioneer Portfolio
The Robert Wood Johnson Foundation focuses on the pressing health and health care issues facing our country. As the nation's largest philanthropy devoted exclusively to improving the health and health care of all Americans, the Foundation works with a diverse group of organizations and individuals to identify solutions and achieve comprehensive, meaningful and timely change. Projects in the Pioneer Portfolio are future-oriented and look beyond conventional thinking to explore solutions at the cutting edge of health and health care. When it comes to helping Americans lead healthier lives and get the care they need, the Foundation expects to make a difference in your lifetime.

About the Institute for the Future
The Institute for the Future (IFTF) is an independent, nonprofit research group with 42 years of forecasting experience. IFTF's core work is in identifying emerging trends and discontinuities that will transform global society and the global marketplace. IFTF provides insights into business strategy, design process, innovation, and social dilemmas with research that generates the foresight needed to create insights that lead to action. IFTF research spans a broad territory of deeply transformative trends, from health and health care to technology, the workplace, and human identity. The Institute for the Future is located in Palo Alto, CA.

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