

2011 JOHNS HOPKINS UNIVERSITY BUSINESS PLAN COMPETITION WINNERS

General Business

1st Place – Magpie Sensing

Magpie Sensing will provide a comprehensive solution to the problem of pharmaceutical cold-chain monitoring. Magpie Sensing has created a device (Magpie 1), currently in the prototype phase, which is small enough to ship along with vaccines or other cold-chain products. The Magpie 1 requires no infrastructure installation and can monitor all aspects of shipment integrity, from temperature and humidity to shock and light exposure. Most importantly, the Magpie 1 logs a crucial metric which all other platforms fail to effectively provide: location.

Using a cellular internet connection and cell-tower triangulation, the Magpie 1 continuously tracks its location to within a mile, even from within a box. It records not only when any cold-chain violations occur, but where. It then uses a cellular connection to instantly relay information about the violation to Magpie Sensing's central server, where it is sent to a responsible party, either a vaccine manufacturer, shipper, or provider. The party can immediately act on this information, either voiding the shipment before it arrives, or testing the vaccine thoroughly upon its arrival, secure in the knowledge that any decrease in efficacy can be traced to a responsible (and liable) party.

Thomas Smith - Krieger School of Arts and Sciences, Undergraduate

Robert Douglas - Whiting School of Engineering, Undergraduate

Brendan Ebers - Whiting School of Engineering, Undergraduate

[Magpie Sensing website](#)

2nd Place – The AVE

Recognizing the market's need for greater diversity and consumer-designer interaction, The Ave will develop a website that connects hundred-of-thousands of independent boutiques, to millions of e-shoppers in an online marketplace and community setting. Independent designers will have stores and galleries hosted on The Ave. E-shoppers will each have their own profiles, with the abilities to communicate and build relationships with designers and other shoppers. The creation of the Ave will give aspiring designers and independent boutiques a powerful and efficient resource to market products, connect with customers, and build their own brands. For consumers, The Ave offers a wide variety of independent fashion, and the promise of designer-client interaction. The website will bring together designers and consumers of all levels and interests, and create an online e-commerce community based upon three modes of communication: designer-designer, designer – consumer, and consumer-consumer interactions.

Michael J. Suen - Krieger School of Arts and Sciences, Undergraduate

Mary M. Suen

Hong Hong Lin

Wing-Yin to

3rd Place – Vintouch

5sense, Inc., a Delaware corporation, was formed on February 2nd, 2011 to address the needs of hospitality and retail establishments in their quest to better connect with their clients and patrons. 5sense's flagship product is VinTouch and its subsidiary services. This document explores the business case for VinTouch--personalized interactive wine list software for tablet devices, designed for restaurants and potentially other wine retail establishments, that will increase sales by simplifying the wine ordering process and boosting patrons' confidence in selecting wines. Through the VinTouch platform, 5sense provides restaurants with a cost-effective tool that can significantly raise wine revenues--one of the most profitable elements of the food service industry.

Karthik Seshan - Whiting School of Engineering, Graduate
Merek Gourley- Whiting School of Engineering, Graduate
Kyle Schroeder - Whiting School of Engineering, Graduate
Ying Cheng - Whiting School of Engineering, Graduate
Venkata Uday Garikipati - Whiting School of Engineering, Graduate
Raghu Sunkara

Life Sciences

1st Place – Boss Medical

BOSS Medical is commercializing a new device to improve spinal fusion procedures by reducing patient morbidity and surgical risk – all while achieving gold-standard spinal fusion rates at a substantially lower cost than comparable tools.

BOSS Medical will provide spinal fusion patients with the best surgical care by enabling surgeons to deliver bone graft without complications or high costs to the hospital. Our device has the potential to replace all existing options in the United States and worldwide as a universal bone grafting solution.

Maxim Budyansky - Whiting School of Engineering, Graduate
Shoval Dekel - Whiting School of Engineering, Graduate
Haim Gottfried - Whiting School of Engineering, Graduate
Neil Shah - Whiting School of Engineering, Graduate
Peter Truskey - Whiting School of Engineering, Graduate

2nd Place – ReSpine Therapeutics

ReSpine Therapeutics is a seed stage medical device company. Our platform technology, a biodegradable scaffold, is capable of assisting the regeneration of spinal cord tissue. Our product may be used as a stand-alone device, or may be easily combined with additional small molecules or biological therapeutics to more robustly induce central nervous tissue regrowth after injury.

Angelo Encarnacion - Carey Business School, Graduate
Glenn Ketover - Carey Business School, Graduate
Richard Morgan - Krieger School of Arts and Sciences, Graduate

Pei-Jyun Liao - Krieger School of Arts and Sciences, Graduate
Shelley Pitter - Krieger School of Arts and Sciences, Graduate
Rose Iyirhhiaro - Krieger School of Arts and Sciences, Graduate
Risheng Xu - School of Medicine, MD/PhD Candidate
Jason Chen - M.D. Student

3rd Place – Quantum Biodesign, LLC

Quantum Biodesign LLC is a start-up medical device company that aims to improve the efficiency, quality, and effectiveness of modern health care through technologically disruptive product design. The company's flagship product is QuanTube, a next-generation replacement gastric feeding device.

QuanTube aims to disrupt the replacement feeding device market by completely circumventing the fail-and-reinstall cycle associated with current replacement devices. Through a combination of its unmatched ease-of-use for non-specialists, comfort for patients, and superior durability, QuanTube will establish a firm competitive advantage over existing market offerings.

Akshay Krishnaswamy - Whiting School of Engineering, Undergraduate
Ryan Chang - Whiting School of Engineering, Undergraduate
Sharon Ovadia - Whiting School of Engineering, Undergraduate
James Lin - Whiting School of Engineering, Undergraduate
Katrina Lee - Whiting School of Engineering, Undergraduate
Steven Dalvin - Whiting School of Engineering, Undergraduate
Ping He - Whiting School of Engineering, Undergraduate
Tony Ye - Whiting School of Engineering, Undergraduate
Minyoung Jeon - Whiting School of Engineering, Undergraduate

Social Enterprises

1st Place (tie) - Antenatal Solutions

The Antenatal Screening Kit is a product that can screen mothers for high risk conditions during pregnancy in developing nations where healthcare is unaffordable or unattainable. The kit is composed of a suite of "magic markers" which can be drawn on filter paper to test for urine and blood abnormalities. This platform provides an extremely affordable and sustainable solution, and enables healthcare delivery to even the remotest villages.

Sean Monagle – Whiting School of Engineering, Graduate
Maxim Budyansky – Whiting School of Engineering, Graduate
Mary O'Grady – Whiting School of Engineering, Graduate
Peter Truskey – Whiting School of Engineering, Graduate
Sherri Hall – Whiting School of Engineering, Graduate
Matthew Means – Whiting School of Engineering, Graduate
Shishira Nagesh – Whiting School of Engineering, Graduate
James Waring – Whiting School of Engineering, Graduate

[Antenatal wins Global Health Prize](#)

[Antenatal Solutions on CNN](#)

[Antenatal mentioned in Inventors Digest](#)

[Antenatal Solutions part of a \\$24 million dollar Global Health Innovation Project](#)

[Popsci Article featuring Antenatal Solutions](#)

[Antenatal Solutions YouTube Commercial](#)

1st Place (tie) - Fresh2O

Fresh2o provides arsenic-affected Bengali households low-cost water filters, thereby giving villagers both access to clean water and immunity from waterborne illnesses. Bangladesh, a developing country with a total population of more than 160 million, is currently facing the “largest mass poisoning of a population in history,” according to the World Health Organization. More than 77 million Bengalis are at risk for arsenicosis, an incurable cancer-causing disease contracted by those who consume high amounts of arsenic-contaminated tube well water.

Minhaj Chowdhury – Krieger School of Arts & Sciences, Undergraduate
Samuel Jockel – Krieger School of Arts & Sciences, Undergraduate

3rd Place - The Community Supported Agriculture Model for Torture Survivors

Over the last 20 years, the market for locally produced food has expanded significantly. In the United States, organic food and beverage sales have increased from \$1 billion in 1990 to \$24.8 billion in 2009.⁸ The steady growth in consumer preference for locally grown, organically produced food sources is also evidenced in the rapid expansion of farmer’s markets and community-supported agriculture (CSAs) in the United States. According to the USDA, the number of farmer’s markets operating in the United States has grown from 1,755 in 1994 to 6,132 in 2010.⁹ Similarly, CSAs began with just two farms on the East Coast in 1986 and have expanded to include over 12,549 farms as of 2007 selling produce through a CSA.¹⁰ The steady growth in all of these mechanisms for selling food directly to local consumers indicates an increasing demand and lack of market saturation. With the slow food movement in the United States continuing to influence consumer preferences, we believe the community farm model to be financially viable. In addition, data indicates that consumers choose to join CSAs and purchase locally grown food primarily for social reasons.¹¹ We believe that a farm supporting torture survivors will further influence the social considerations of consumers purchasing local food, causing them to preferentially differentiate our farm from other local producers.

Tara Vecchione – Bloomberg School of Public Health, Graduate
Melodie Kinet – Bloomberg School of Public Health, Graduate