

# GPI INNOVATOR OF THE YEAR AWARD

## PLANTFORM CORPORATION



**Mark Goldberg, Chair  
of the Board of Directors**

**Ron Hosking, Chief  
Financial Officer**

**Don Stewart,  
President and CEO**

**Michael McLean,  
Director Research**

**Chris Hall,  
Chief Scientific Officer**

GPI is pleased to award Innovator of the Year to PlantForm Corporation, a company that demonstrates that Guelph has the research, the people, the entrepreneurial drive and the support organizations to compete in the global market.

### Highlights

- PlantForm, established in 2008, is focused on providing plant-based, low-cost therapeutic antibody drugs to help people fight cancer.
- A multi-billion dollar market exists, eager for lower-cost large molecule drugs to increase accessibility.
- PlantForm's first product will be a generic (biosimilar) version of Herceptin (trastuzumab), a drug that fights breast cancer. Herceptin had a 2009 market of \$5 billion.
- Completed proof of concept studies for PlantForm's biosimilar trastuzumab have shown equivalent activity to Herceptin.
- PlantForm licenses its commercializing technology from the University of Guelph, where it was developed by Dr. Chris Hall, PlantForm's Chief Scientific Officer.
- A solid management team is supported by an experienced board of directors and a strong technical advisory board.
- Canada Top 10 Life Sciences company winner.

### Health Care Challenge

Millions of people needlessly die from cancer every year because the drugs that could help them fight the disease are too expensive. Antibody treatments, such as Herceptin for breast cancer, can cost up to \$100,000 per year, per patient. The introduction of more affordable medications is a priority for patients and health-care providers alike.

### Competitive Advantage

In the early 1990s, as the concept of recombinant protein production in plants was beginning to take shape, Dr. Hall's laboratory at the University of Guelph recognized the advantages of using greenhouse-grown tobacco plants as a platform to produce a broad range of antibody drugs and vaccines.

PlantForm's proprietary technology offers several advantages over other systems: it is highly adaptable to new products, development timelines are far shorter, and manufacturing costs are dramatically reduced. Fully active, generic versions of approved antibody drugs can be produced for as little as five per cent of the cost of name-brand products.

### Development Status

The company has demonstrated that its biosimilar trastuzumab has equivalent structure and activity compared to Herceptin, the current drug of choice, which begins to lose patent protection in 2014.

### Commercialization Next Steps

PlantForm is currently seeking financing to conduct further studies of its biosimilar trastuzumab and to prepare a regulatory filing for a Phase 1 human clinical study. Approximately \$5 million to \$7 million is required to achieve completion of the Phase 1 clinical trial.

The company is also pursuing a co-development licensing agreement with a major development and marketing partner from the biopharmaceutical sector to fund a Phase III trial (a Phase II trial is not required for biosimilar drugs). With this partner, PlantForm plans to launch biosimilar Herceptin in world markets, beginning in Europe in the 2015 to 2016 timeframe.

PlantForm will also use its production platform to produce biosimilar versions of three other cancer drugs that, with Herceptin, had combined annual global sales of \$23.1 billion in 2009.