

Passport® Food Safety Solutions, Inc. offers a cooperative, innovative systems approach to help meat and poultry processors develop practical solutions that consistently meet increasingly stringent food safety standards by using multi-hurdle intervention technologies, predictive analytics and consultation to optimize pathogen reduction.

## **Food safety continues to be a common and costly challenge throughout the world**

Throughout the world, an estimated 600 million cases of foodborne illness occur each year,<sup>1</sup> 48 million of those cases are estimated to occur in the United States.<sup>2</sup>

Foodborne illness is caused by consuming foods or beverages contaminated by bacteria, viruses, parasites or chemicals. Reported cases often are tied to a few specific pathogens: *Salmonella*, *E. coli*, *Listeria*, *Campylobacter* and viruses. Based on data for both public health costs and the quality-of-life impact, meat and poultry are the largest contributors to foodborne pathogen diseases.

The cost of public health interventions due to foodborne illness is staggering. For example, the average cost per human case of salmonellosis in the EU is more than 1,000 euros, and *Salmonella* costs the United States \$3 billion annually.

Beyond that, the cost of a product recall due to an outbreak (defined as two or more cases of a similar illness resulting from ingesting a common food) can be astronomical due to lost product and sales, liability, litigation and damage to an individual brand – and to consumers' confidence in the safety of their food. In 2012, the U.S. Centers for Disease Control and Prevention reported 831 foodborne-disease outbreaks, 20 of which resulted in a product recall.

Even though multiple interventions are used pre- and post-harvest to reduce/eliminate pathogens, current solutions have not been 100 percent effective. Controlling pathogen impact is a balance of prevention, intervention and detection.

That's why ensuring a high level of food safety is a priority for everyone involved with producing and processing meat protein. Innovation is essential to meet new regulatory requirements and consumers' expectations.

## **Our unique, proven analytics system converts data into prescriptive solutions**

Our team of food safety specialists created PassTrac® Analytics to evaluate plant-specific metrics in context with industry benchmarks. We work with managers to apply the resulting insights and develop practical solutions that consistently optimize food safety – even in the face of seasonal, operational and other potentially disruptive factors.

What makes PassTrac Analytics novel:

- We use predictive modeling and consultation to help managers more quickly make well-informed decisions that can reduce risk and minimize financial losses.
- Our team members pioneered what has become the gold standard system for benchmarking beef production metrics and using that information to help individual producers improve their production systems. We combined this expertise with prescriptive modeling capabilities and our understanding of food safety interventions, meat processing and real-world data analysis to develop PassTrac Analytics.
- Recognizing that many factors (e.g., weather, source of animals, operational variation) can affect pathogen levels at harvest, PassTrac Analytics helps predict variation at the plant level. We use these insights to help managers develop a practical system for consistently managing pathogen levels by mitigating potential problems before they occur.

## **New innovation model will drive development of new food safety technologies**

Passport Food Safety Solutions leverages a unique collaborative innovation model that involves a panel of leading meat production companies and food safety experts in evaluating and commercializing novel food safety technologies.

Our core business is food safety solutions, which makes Passport Food Safety Solutions unique and the ideal organization to partner with meat production companies and food safety experts. By involving experts and industry stakeholders to assist in developing products and practices to improve food safety, we can bring new food safety innovation technologies to market more quickly and efficiently.

## We provide a source for novel products backed by unmatched service

Since there is no “silver bullet” when it comes to eliminating foodborne pathogens, we will offer a broad portfolio of pre- and post-harvest products that help reduce levels of foodborne pathogens on meat, including some of the newest and most innovative technology available.

All products are backed by dependable technical support. Our experienced professionals help design, install and service product application systems, and provide ongoing support. Passport Food Safety Solutions also offers consulting services to identify and develop a customized, multi-hurdle approach to food safety.

## Our team is passionate about helping continuously improve food safety

The Passport Food Safety Solutions team collectively has more than 70 years of experience in animal health and food safety. What makes our team truly unique is combining our real-world experience in analytics and global protein production with a total focus on food safety.

## Passport Value Proposition



### Tom Nicholson, President and CEO

Prior to Passport Food Safety Solutions, Tom was commercial director for Elanco's food safety business, where he helped create the new business unit and developed and commercialized novel food safety technologies for meat protein production. Before that, Tom was vice president of Ivy Animal Health, where he led the sales and marketing team to become market leaders due to a robust benchmarking beef production analytics system and consultation that became the industry standard. With 25 years of experience, Tom also worked for Syntex Animal Health and Pfizer Animal Health (now Zoetis). He earned a bachelor's degree in animal science from Iowa State University.



### Jackson McReynolds, Ph.D., Senior Vice President and Chief Scientific Officer

Before co-founding Passport Food Safety Solutions, Jackson was a technical consultant for Elanco, helping beef and poultry customers reduce foodborne pathogens. He also developed procedures for applying bromide-based chemistries in processing plants, was lead scientist for developing *Salmonella* and *E. coli* phage technologies, and developed modeling systems to better understand foodborne pathogens throughout the production chain. Before that, Jackson was a research scientist for the U.S. Department of Agriculture Agricultural Research Service, where his team earned a patent for high-energy electron beam irradiation for the production of immunomodulators in poultry.

He earned bachelor's, master's and doctoral degrees in poultry science from Texas A&M University.

## Contact us

We look forward to hearing from you about the food safety challenges your organization is facing and exploring ways Passport Food Safety Solutions can help. Our offices are in Johnston, Iowa; and College Station, Texas; and Goias, Brazil. We also plan to expand to other parts of the world.

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<sup>1</sup>Center for Disease Control and Prevention. "Estimates of Foodborne Illness in the United States." <http://www.cdc.gov/foodborneburden/index.html>. 19 Aug. 2016.

<sup>2</sup>Food Safety News. "WHO Releases First Global Estimates of Foodborne Disease." [http://www.foodsafetynews.com/2015/12/who-releases-first-global-estimates-of-foodborne-disease/#.V\\_56A5MrKi4](http://www.foodsafetynews.com/2015/12/who-releases-first-global-estimates-of-foodborne-disease/#.V_56A5MrKi4). 4 Dec. 2015.

