

# ONTARIO **Hog** FARMER



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**WHEN PIGLET IRON  
BECOMES TOXIC**

**MANDATORY  
TRACEABILITY  
COMING**

## **A lab partner**

**GALLANT CUSTOM LABORATORIES  
PLAYS A KEY ROLE IN DIAGNOSING  
AND PROTECTING AGAINST HOG  
DISEASES IN ONTARIO**

Jackie Gallant

# A lab par

## Gallant Custom Laboratories plays a key role in diagnosing and protecting against hog diseases in Ontario

BY JOHN GREIG

ACROSS FROM A MEGA mall and sheltered in the corner of a Cambridge strip mall is one of the companies which performs a quiet, but important function in Ontario's campaign against hog disease.

Gallant Custom Laboratories is a company one doesn't hear from a lot, but its diagnostic services and autogenous vaccines serve as the base upon which much disease is diagnosed, treated and controlled in the province.

"We are fundamentally a vaccine company," says Jackie Gallant, the company president and founder. She now handles much of the organization and running of the company, although she admits lab work remains her favourite task.

"For me it's finding out something unknown. It's putting together a picture and story from the lab results and being surprised by the answer."

Autogenous vaccines are created to provide protection from specific strains of a disease. Vets take

material from the farm which includes the strain on the farm and send it off to Gallant. The workers in the laboratory then isolate the strain and over a couple of weeks, for bacteria vaccines, take that strain and make it into a killed vaccine.

All of Gallant's vaccines are killed. The lab can put as many as 10 strains into one vaccine. They all have to be used by farmers under the supervision of a veterinarian.

The lab's vaccines cover: flu, scours, respiratory disease, arthritis, Glasser's disease, greasy pig, meningitis, diamond skin disease, and atrophic rhinitis.

Vaccines work by exposing an animal to a small amount of bacteria or virus. The body's immune system then readies a defence against the disease, so that when it is exposed to a strain in the environment, it doesn't get as sick, and often doesn't get sick at all. Live vaccines are more effective, but carry more risk. Killed vaccines are almost as good, but can't replicate in their host, and boosters are needed. Live vaccines usually give lifetime immunity.

Sows and gilts usually get the autogenous vaccines, as it is a lot of work and expensive to treat every piglet.

Gallant Custom Laboratories also has been able to make viral autogenous vaccines since the fall of 2011, a

# Partner



**Jackie Gallant stands in front of one of the labs at Gallant Custom Laboratories**

first for Canada. Previous to that, Ontario vets had to go to the U.S. to get such vaccines made, when there was an American company with a license to do so in Canada.

“We had to redesign the lab to have two isolation units,” says

Gallant. The lab is inspected and licensed by the CFIA.

“It’s a total different product line. The production method for virus is very very different from bacteria.”

Bacterial vaccines are grown in a liquid culture and can be grown in a

couple of days. Viral tissue culture is grown in a monolayer of cells in a flask, and can take up to two months.

Two months may seem like a long time to wait to prevent a disease already in the herd, but Gallant points out that vaccines aren’t for treating

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disease, they are for preventing it in the healthy animals.

The virus work is mainly to create vaccines for swine influenza virus.

In the diagnostics lab, Gallant Custom Laboratories helps to identify diseases from farms. They can tell you more than most labs, and like to delve down to the strain of a disease, versus just telling the farm which disease they have.

Gallant says vets make a diagnosis, then send samples to the lab for further testing. Sometimes they find the vets were wrong.

Gallant also provides testing as a sentinel for boar studs. Some boar studs in the province now test every batch of semen which goes out the door for the nasty Porcine Reproductive and Respiratory Virus. They get same-day service on the PRRS testing.

“They know right away about emerging problems. We work nights and weekends if they need us to,” says Gallant.

“We basically do not run production without Gallant,” says Stuart Devries, general manager of Total Swine Genetics. “They are that core of a partner on our health insurance program.”

Devries says their business model was built around Gallant’s ability to test collected semen and then get the results back to Total Swine Genetics before it will be used by the farmer the next day.

Eleven people work in the warren of 60 rooms, of varying levels of isolation and security. The business now occupies 4.5 units in the complex.

Gallant founded the company in 1995. She had been working for Langford Laboratories, which was bought out by American Home Products, and which decided to close the Canadian operations.

Gallant has an agriculture degree from the University of Guelph where she majored in microbiology, so the Langford job was perfect for her. Suddenly she was confronted with a career-altering decision. The company offered her the autogenous vaccine business and she took it, creating the company in Guelph.

Four years later, the company was growing and she found a landlord amenable to what she wanted to do in Cambridge, where she lived.

“We have been able to expand in both directions. It’s central and easy to get to.”

The lab isn’t far south of Hwy. 401, just off Hespeler Road.

“Veterinary microbiology was my ideal job. I’m doing what likely is my ideal job.”

Her workers all have university degrees or post secondary lab training. She says she doesn’t have a difficult time finding workers, as

there’s the University of Guelph, University of Waterloo and McMaster University all within striking distance and all with microbiology programs. Conestoga College also does lab training.

She does, however, look for employees with passion for agriculture. After all, what’s coming into the lab often involves animals and manure, and barn smells, although she says, “E. coli is E. coli wherever you go.”

There’s no program which specifically trains workers for veterinary labs, she says.

Technology has had a great effect on laboratory work, especially the introduction of Polymerase Chain Reaction of PCR, which has allowed for faster, more specific testing involving DNA.

In real-time PCR, small amounts of specific pieces of DNA are copied a billion-fold and are visualized with the aid of fluorescent probes and computer software.

Technology continues to evolve quickly, she says.

Gallant says the scale and focus of her business allow her to well-understand vets and farms, which are also small businesses. Like anyone tied to the hog business, her business goes up and down with the price of hogs.

“I’ve always had fondness for farming industry. It’s nice to be part of that.” 