Innovascreen gets cracking on cancer research

By Heather Sawers
The Daily News

If you pick up an issue of a medical journal, you'll probably see an article about how eating eggs can reduce your risk for certain cancers. A new Maritime company is also showing us that eggs are important in the fight to cure cancer — but it has nothing to do with breakfast.

Doctors John Lewis and Andries Zijlstra met while they were both working as research associates and studying cancer at the Scripps Research Institute in California. Zijlstra's lab had been working with chicken embryos for about 30 years, and Lewis' experience was with imaging.

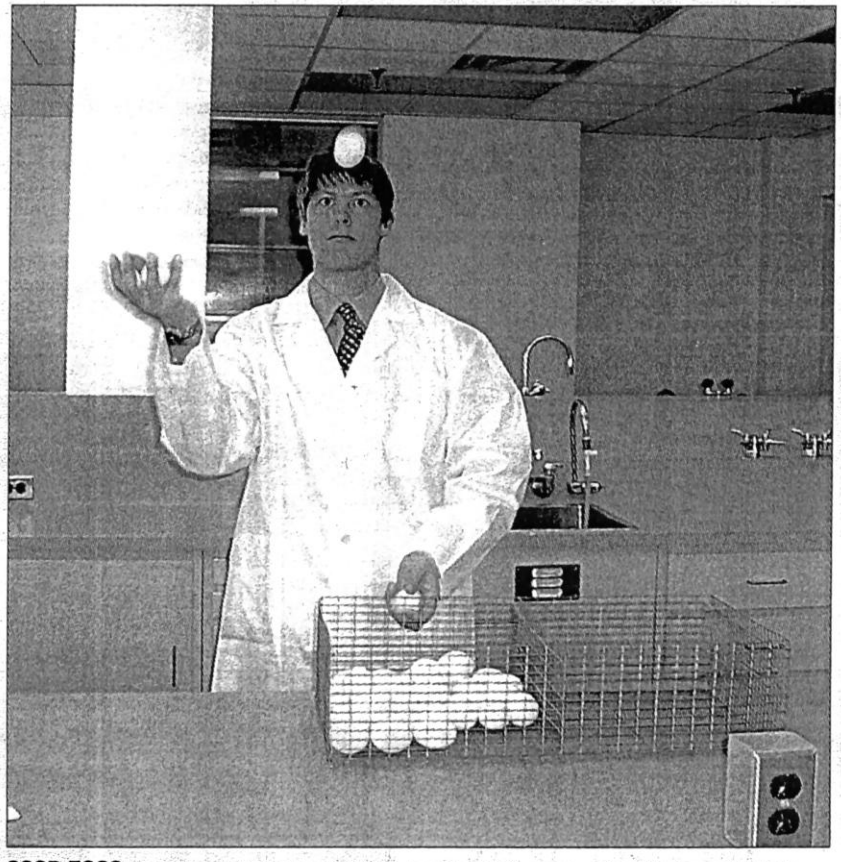
Together, the two doctors made the amazing discovery that they could do pre-clinical research for pharmaceutical companies by testing their products in fertilized chicken eggs.

"We take human cancer and we put it into an egg, and then we put it under the microscope and watch it grow," explains Lewis, Innovascreen's president and CEO. "We then inject the egg with different compounds that a pharmaceutical company gives us, and test (the ingredients) for effectiveness, safety, toxicology, potency, and unwanted side effects."

Lewis chooses to use eggs because they are very sensitive to the pharmaceuticals. Researchers can quickly detect if the drug is getting rid of the egg's cancer or just causing it more harm. Studies that would take two or three months when testing on rodents only take two or three weeks when testing on fertilized eggs.

But does the drug affect a human the same way it affects an egg?

"Chicken eggs are actually living, so they have a lot of the same biological structure as a lot of the higher animals," explains Lewis. While the research doesn't show exactly what kind of side effects a human could incur, it does give Lewis and his colleagues a detailed idea. "We could say, for example, that it affects the blood vessels."



GOOD EGGS: Launched in 2005, Innovascreen is a small N.S. company that does pre-clinical cancer research for pharmaceutical companies by testing their products in fertilized chicken eggs.

Lewis was living in California when he developed this patented imaging technology, and he originally planned to base his business there. But when his wife was accepted at Dalhousie Medical School, the Ontario-native moved to Nova Scotia and launched Innovascreen last August. He says the company's name has been carefully chosen to include three meanings: 'Innova' means 'in Nova Scotia'; 'ova' is Greek for egg, and 'screen' is what the company does.

Innovascreen started off small, with only three employees.

Along with Zijlstra, one of the first to join the new company was former Nova Scotia premier Russell MacLellan. He signed on as their Business Development Officer.

Lewis says MacLellan has been 'incredibly helpful' over the past year.

"He's connecting us with members of the community and suppliers, and enabling us to get equipment."

The first year of any business is usually rough, but Lewis says 2005 was very productive for Innovascreen.

"We successfully launched our operations in Nova Scotia, we identified a number of sources of financing, and we wrote up our first contract."

2006 is set to be an even bigger year for Innovascreen. At the beginning of January they moved into lab space at the BioScience Centre on Lower Water Street, and they plan to launch their own Research and Development division.

"We plan to use our screening methods to develop an anti-cancer pharmaceutical of our own," Lewis explains.

Innovascreen already has the drug in the works, and they will begin the initial screening on April 1.

Lewis says the most fulfilling part of his job is "having a personal involvement in trying to address the huge issue of cancer in our society, especially in Nova Scotia."

He says cancer has struck several members of his family, and he is "looking forward to tackling the problem."