Developing efficacious immune-based strategies for control of avian influenza in poultry

Avian influenza viruses (AIV) pose a threat to poultry and human health. The most recent AIV H5N2 outbreaks in the US and Canada affected close to 43 million chickens and turkeys in these two countries signifying the importance of developing and implementing measures to control this virus. Dr. Shayan Sharif, a University of Guelph researcher and leader of the Poultry Health Research Network, aims to develop vaccines and other immune-based strategies for control of AIV in poultry. Sharif’s group is taking advantage of a family of microbial compounds that have immune enhancing abilities. His group has been able to show that these compounds can induce a robust and effective immune response against AIV in chicken tissues and cells. This group is now testing these microbial compounds to boost immunity generated by AIV vaccines. In addition, Sharif’s group is evaluating the ability of these compounds to be used as standalone antiviral interventions. The aim of these studies is to develop cost-effective and efficacious strategies to enhance immunity against AIV leading to reduction of losses associated with this disease in poultry flocks as well as control of virus shedding in the environment, thus controlling bird-to-bird transmission of the virus. This research group is now working on devising better ways for delivery of these immune stimulants to poultry, for example via spray or injection into the egg.

For more information, please see:
1. Avian influenza virus vaccines containing Toll-like receptors...
2. Systemic immune responses to an inactivated, whole H9N2 avian influenza ...

More information about Bird Flu