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New research offers insights into how adjuvants increase Avian Flu Vaccine effectiveness

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Paper reflects systems biology analysis assessing responses to a vaccine adjuvant.



Singapore - The Emmes Corporation (a US based company) announced that Johannes Goll (co-lead author), Travis Jensen and Heather Hill made significant contributions to a recent paper summarizing new research on a vaccine for the H5N1 avian flu. The research was featured on the front page of the *Proteomics* journal.

Emmes, together with Vanderbilt University, used a "systems biology" approach that examined changes in both gene and protein expression in several human immune cell types simultaneously over time. The research was funded by the National Institute of Allergy and Infectious Diseases, which is part of the National Institutes of Health.

Ultimately, the results from these types of system biology studies will help develop better and more personalized vaccines and result in a greater understanding of how the human immune system responds to vaccines, adjuvants and infectious agents.

The overall goal of this study was to better understand how the adjuvant AS03 enhanced H5N1 avian flu vaccine by integrating multiple genomics and proteomics ("-Omics") technologies. The *Proteomics* paper, which addressed the results from the protein analysis, followed earlier research that summarized gene expression findings.

According to Dr. Anne Lindblad, president and chief executive officer of Emmes, "These efforts continue to strengthen our bioinformatics portfolio. We've invested in our infrastructure to support reproducible and scalable bioinformatics research, and we hope further research will result in better, more personalized vaccines."