



FINAL REPORT

Avian Biosciences Grant Program

Award Recipient Calvin L. Keeler, Jr.

Department Animal and Food Sciences

Date of Award 2006-2007

Title *A Functional Genomics Approach to the Study of Avian Innate Immunity*

Summary of Findings The avian innate immune response is mediated by many cell types, including phagocytic cells (macrophages, heterophils, and dendritic cells). The microarray is a powerful tool for studying immune system function at the transcriptional level. Our laboratory has developed a 4,959 element avian innate immunity microarray (AIIM). The objective of this proposal was to determine whether the AIIM could be used to examine and monitor gene expression from avian heterophils and dendritic cells. Avian heterophil RNA was obtained from Dr. Michael Kogut (USDA ARS, Southern Plains Agricultural Research Center, College Station, TX). We determined that the AIIM could be used to monitor transcriptional activity in these cells, as ~85% of the elements provided signals when hybridized with labeled heterophil aRNA.

Publications Resulting From Research None

Additional Grant Support Received as a Result of ABC Grant None