

Effect of PHYTOCEE® on Gene Expression in Poultry : A Genomic Analysis Using Microarray

OBJECTIVE

To evaluate the heat stress associated gene expression effects of PHYTOCEE® in broiler chicken

MATERIALS AND METHODS

Microarray was performed for three groups, namely, normal control as G1, negative control as G2 (Heat-stress), and PHYTOCEE® (200 g/ton) as G3. Breast muscle samples were collected, RNA was extracted and subjected to gene expression studies using Agilent microarray platform.

RESULTS

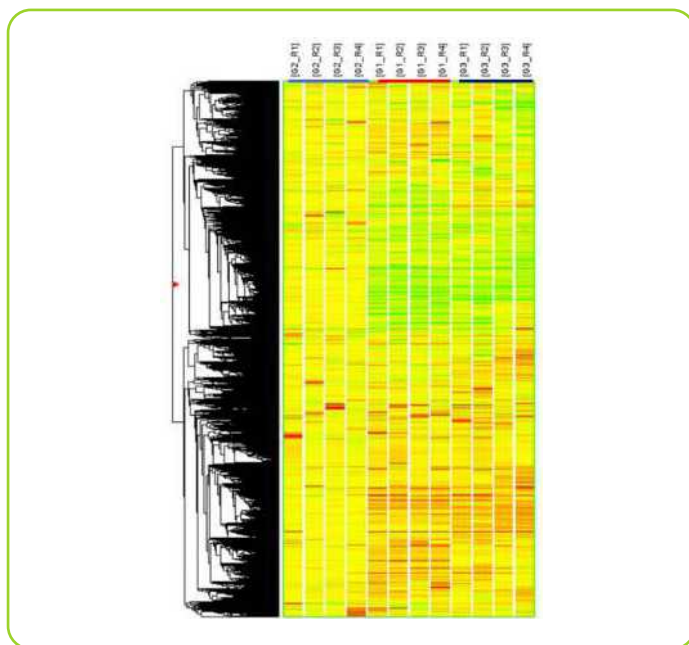


Figure 1: Global genomic effects of PHYTOCEE® as revealed by a heat map

Blue bar, Negative control; Red bar, Normal control; Black bar, PHYTOCEE®

Please note PHYTOCEE® was able to reverse the changes induced by heat stress.

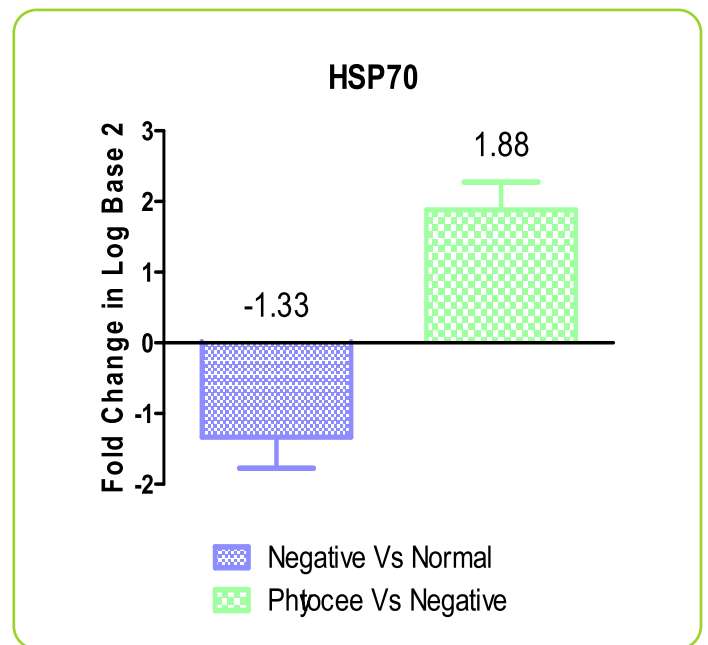


Figure 2: Effect of PHYTOCEE® on HSP70 gene expression

Values are expressed as Mean; n= 6
HSP70, Heat shock protein 70 kDa

CONCLUSIONS

- PHYTOCEE® exhibited global genomic normalizing effect under the influence heat stress.
- PHYTOCEE® upregulated heat induced depression of HSP70 gene expression. HSP70 play a key role in cytoprotective effect.

OUTCOME

These genomic studies add value to understand the antistress mechanism of PHYTOCEE®.