

## Measurement of immuno-competence in avian species

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In the field of avian immunology, there are numerous immune parameters and functions to which different immunological protocols and tests are evolved. Some of these parameters are used to monitor avian health status, while others are measured under a challenging situation by introducing a pathogen. In both cases, some of the immune measures can be performed *ex vivo* or *in vitro*, while others are performed *in vivo*. The general measures of the avian immune response are reviewed here, followed by a review of the more specialized markers of the avian functional immune responses.

### Biography

Hanan Al-Khalaifa graduated as honor student from Kuwait University with Zoology as major and Microbiology as minor. She joined KISR in 1996 as a Research Assistant and was promoted to get her MSc in Immuno-Parasitology from University of Manchester in 2003 and Ph.D. in Immunology from University of Reading in 2010, United Kingdom. She was the leader of three client funded projects, and three general activities. She participated in eight client-funded and in-house projects. Dr. Hanan authored and co-authored 25 refereed articles. She also authored and co-authored 20 papers presented in international conferences and 7 progress and final in-house KISR (Kuwait Institute for Scientific Research) reports.

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