



# WPC2016

THE XXV WORLD'S POULTRY CONGRESS

September 5-9, 2016  
Beijing, China



education organization research

## The Proceedings of XXV World's Poultry Congress 2016 — Abstracts



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## The Proceedings of XXV World's Poultry Congress 2016 — Abstracts

Editors: Ning Yang, Ling Lian, Jiangxia Zheng,  
Xiangping Liu and Changxin Wu

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and organized under the auspices of the World's Poultry Science Association  
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## S2- 0193 Gga-miR- 181a modulates ANP32A expression and Inhibits MDCC- MSB1 cell migration and proliferation

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Marek's disease (MD), a highly contagious T-cell lymphoid neoplasia disease of chickens, causes huge economic losses to the poultry industry. It is the only one tumor disease which can be prevented by vaccine, therefore MD is considered to be an excellent model to study the pathogenesis of virus-induced cancer. Recently, abundant evidences have verified that miRNAs are regulators in the process of neoplastic transformation. In our previous study on miRNome analysis of MDV-induced lymphoma in chicken, we found that gga-miR-181a was down-regulated drastically in MDV-infected spleens. To further investigate the role of gga-miR-181a in MDV-induced lymphomagenesis, we performed cell proliferation and migration assay, and the results suggested that gga-miR-181a suppressed the proliferation and migration of MDV-transformed lymphoid cell (MSB-1). Subsequently, luciferase reporter gene assay revealed that acidic nuclear phosphoprotein 32A (ANP32A) was a functional target gene of gga-miR181a. Real-time PCR and western blot assay were conducted to detect the effects of gga-miR-181a on mRNA and protein expression of ANP32A. The results showed that the mRNA and protein levels of ANP32A were down-regulated in gga-miR-181a mimic group at 48 and 96 hours post transfection, respectively, indicating that ANP32A was modulated by gga-miR-181a. All the results suggested that gga-miR-181a could be an inhibitor in MSB-1 cell proliferation and migration. ANP32A was a direct target gene of gga-miR-181a and they were involved in MD lymphoma tumorigenesis.

**Keywords:** chicken, Marek's disease, gga-miR-181a, ANP32A

## S2- 0194 The genetic diversity of qualitative traits of Kokok Balenggek chicken under ex situ conservation in West Sumatera Indonesia

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Kokok Balenggek chicken is one of animal genetic resources (AnGR) derived from west Sumatera that developed in endemic area. They are unique as they have a very nice song with multi-level sound. The identification of genetic diversity of indigenous chicken is very important for animal conservation. Characterization of AnGR encompasses all activities associated with the identification, qualitative and quantitative description. An experiment was conducted to identify the genetic diversity of qualitative traits of Kokok Balenggek chicken in ex situ area in Solok, West Sumatera. A total number of 233 Kokok Balenggek chicken (102 female and 121 male) were characterized for qualitative traits. The qualitative traits base on color of feather, plumage, flick feather, feather pattern, shank colour, and comb types. Data were analyzed using formulas to identify the allele frequency and the genetic variability. The method were used to analyze the frequency of autosomal and sex-linked of the genes, feather pattern and heterozygosity. The result indicated that the predominant of allele frequency of qualitative traits of Kokok Balenggek chicken are coloured (i) 0.82, columbian (e) 0.53, barred feather (B) 0.64, golden flick feather (s) 0.73, yellow shank coloured (Id) 0.57 and single comb (p) 1.00. Based on the type of plumage color of Kokok Balenggek chicken have shown predominantly on Biriang (30.39%). According to the rate of heterozygosity value of Kokok Balenggek chicken, genetic variability varied within 34.95%. In conclusion, the Kokok Balenggek chickens show genetic diversity on the qualitative traits. The further study on their quantitative traits and the molecular composition are needed to complete a set of characterization of Kokok Balenggek Chicken

**Keywords:** diversity, qualitative traits, kokok balenggek, allele frequency

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A handwritten signature in black ink, appearing to be '吴春信' (Wu Chunxin).

*Changxin Wu*

2016.09.09