## عنوان مقاله:

The Interaction of Dopaminergic System and GABAB Receptor in Food Intake Regulation of Neonatal Chicken


## محل انتشار:

مجله علوم طیور, دوره 10, شماره 2 (سال: 1401)

تعداد صفحات اصل مقاله: 10



## نویسندگان:

Mona Hashemzadeh - *Department of Basic Sciences, Faculty of Veterinary Medicine, Science and Research Branch, Islamic Azad University, Tehran, Iran*

Moteza Zendehdel - *Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tehran, ۱۴۱۵۵-۶۴۵۳, Tehran, Iran*

Vahab Babapour - *Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tehran, ۱۴۱۵۵-۶۴۵۳, Tehran, Iran*

Negar Panahi - *Department of Basic Sciences, Faculty of Veterinary Medicine, Science and Research Branch, Islamic Azad University, Tehran, Iran*



## خلاصه مقاله:

Animal studies have shown the role of gamma amino butyric acid (GABAergic) and Dopaminergic systems in controlling appetite, but their interactions in birds have not yet been investigated . In this study, ۶ experiments were carried out to investigate the interactions between GABArergic and dopaminergic systems in fresh laying hens (Each experiment included ۴ groups, ۱۱ chicks per group). Chicks received intracerebroventricular (ICV) injections after ۳h of starvation in the following form: In ۶ experiments; Each experiment has ۴ groups. Group ۱ (CON): Received Saline as a control group. Group ۲ (DOP): Dopamine neurotransmitters include ۱۲۵ nmol L-DOPA (levo-dihydroxyphenylalanine) as a dopamine precursor. ۶-OHDA, ۲.۵ nmol as a dopaminergic neurotoxin. SCH۲۳۳۹۰, ۵nmol. AMI-۱۹۳, ۵nmol. NGB۲۹۰۴, ۶.۴nmol and L-۷۴۱۷۴۲, ۶nmol. (L-DOPA, ۶-OHDA, D۱ receptor, D۲ receptor, D۳ receptor and D۴ receptor antagonists), respectively (each of them in one of the experiments). Group ۳ (GABA): Baclofen, ۰.۲μm (GABAB agonist). Group ۴ (DOP+GABA): Receive Baclofen simultaneously with any of the L-DOPA, ۶-OHDA, D۱, D۲, D۳ and D۴ antagonists, respectively (each of them in one experiments). Cumulative consumption of food (based on the percentage of body weight) was measured up to ۱۲۰ minutes after the injection. According to the results, ICV injection of Baclofen alone significantly increased feed intake ($P < ۰.۰۵$). None of the dopamine receptors (L-DOPA, ۶-OHDA, D۱, D۲, D۳, D۴, as well as dopamine synthesis inhibitors) did not affect food intake ($P > ۰.۰۵$). The co-injection of the L-DOPA, ۶-OHDA, D۱-D۴ receptor antagonists + baclofen ($P> ۰.۰۵$) showed no significant effect. The results of this study showed that dopaminergic and GABAB receptors had no interaction in FD۳ neonatal layer-type chicken.



## کلمات کلیدی:

birds, Dopamine, feed intake, GABAergic system