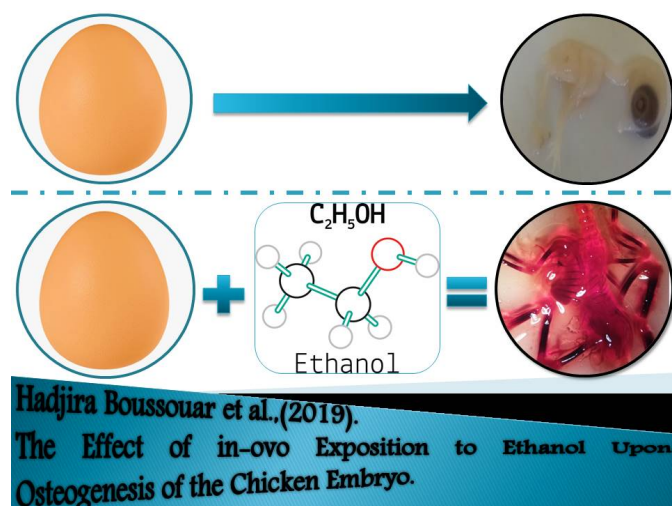


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Volume 9 (2); June 25, 2019 [[Booklet](#)] [[EndNote XML for Agris](#)]



Research Paper

The Effect of *In Ovo* Exposition to Ethanol Upon Osteogenesis of the Chicken Embryo.

Boussouar H, Khenenou T, Bennoune O and Berghiche A.

J. World Poult. Res. 9(2): 32-37; pii: S2322455X1900005-9

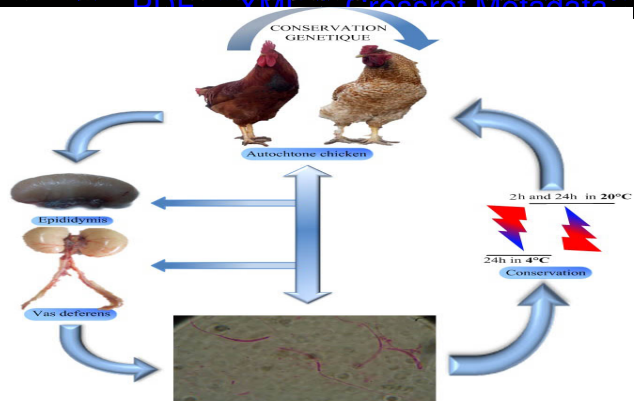
DOI: <https://dx.doi.org/10.36380/jwpr.2019.4>

ABSTRACT

Excessive alcohol consumption by a pregnant woman may delay foetal development and may cause malformations. In this study, the model of the chicken embryo to demonstrate the teratogenic effect of ethanol (33%) on the chicken osteogenesis on the 10th day of embryonic development have been used. 49 fertilized eggs were used in present investigation. Hence, different doses of ethanol were injected into the chicken embryos at 33% (20, 40, 80µl) in the air space at gastrulation and, on the other hand, an equivalent amount of the mentioned doses of distilled water were injected into the control-group eggs which was done once in every two days in order to maintain a high concentration in the blood. Experiments were repeatedly and independently carried out for three times. The eggs were incubated in a humid incubator at the temperature of 37.7 °C and at 60-65% of humidity. On the 10th day of incubation, the embryos were taken out and fixed in formalin at 10%. After that, the eggs were sectioned at 5µm of thickness with a Leica micrtome and, then, stained with the Hematoxylin and eosin. Histological examination has revealed that the exposition of chicken embryos to ethanol (33%) delays the skeletal development in a dose-dependent manner by reducing the length of the cartilaginous proliferation zone and hypertrophic zone during the bone formation period. Furthermore, under the effect of ethanol, the cell proliferation activities were repressed. In conclusion, present results indicated that using ethanol to treat chicken embryos at early stages caused considerable malformations and a decreased in the embryo survival rate. The exposition to alcohol affects the chicken osteogenesis in a dose-dependent manner.

Keywords: Chicken embryo, Ethanol, Malformations, Osteogenesis, Teratogenic effect

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Recent Update: Effects Due to Aflatoxin in Broiler Chickens

Igenbayev A, Nurgazetova A, Okuskanova E, Rebezov Y, Kassymov S, Nurymkhan G, Tazeddinova D, Mironova I and Rebezov M (2019). Fatty Acid Composition of Turkey Meat. *J. World Poul. Res.*, 9 (2): 78-81. <http://iwpr.science-line.com>



6-12 month aged female, broad-breasted Bronze turkeys
Location: Republic of Kazakhstan, East-Kazakhstan region

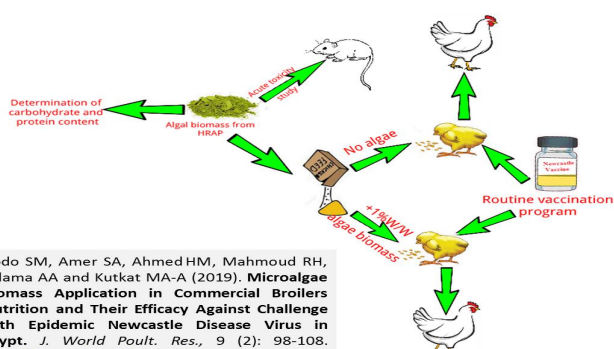
| Name of fatty acid | Turkey meat | |
|------------------------------------|-------------|----------|
| | White meat | Red meat |
| Saturated fatty acids | 50.67 | 52.64 |
| Lauroic (C12) | 0.42 | 0.65 |
| Myristic(C14) | 0.54 | 1.17 |
| Pentadecanoic acid c15 | 21.15 | 22.06 |
| Palmitic(C16) | 21.15 | 20.12 |
| Margaric acid (C17) | 0.21 | 0.78 |
| Stearic acid (C18) | 7.2 | 7.86 |
| Monounsaturated fatty acids | 28.07 | 23.79 |
| Palmitoleic acid (C16:1) | 5.9 | 3.86 |
| Oleic acid C18:1 | 22.17 | 19.93 |
| Polyunsaturated fatty acids | 21.26 | 23.57 |
| Linoleic acid (C18:2) | 19.91 | 22.21 |
| Linolenic acid (C18:3) | 1.17 | 1.24 |
| Arachidonic acid (C20:4) | 0.18 | 0.12 |
| Thiophyll | 1.99 | 1.29 |



Habibi H, Ghahtan N and kohanmoo MA (2019). Evaluation of Dietary Medicinal Plants and algae in Laying Japanese Quails. *J. World Poul. Res.*, 9 (2): 82-89. <http://iwpr.science-line.com>



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Abdo SM, Amer SA, Ahmed HM, Mahmoud RH, Salama AA and Kutkat MA-A (2019). Microalgae Biomass Application in Commercial Broilers Nutrition and Their Efficacy Against Challenge with Epidemic Newcastle Disease Virus in Egypt. *J. World Poul. Res.*, 9 (2): 98-108. <http://iwpr.science-line.com>



Necrotic Enteritis Vaccine for turkey



El-Sergany E, Hamed E-H, El-Sawy H, Medhat T, Yasser A and Alaa E-M (2019).
Preparation of Necrotic Enteritis Vaccine for Turkey. *J. World Poult. Res.*, 9 (2):

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