

حماية الطب البيطري

ثانياً: الدكتوراه

التوليد والتناسل

دراسة عن التبويض المتعدد في الجاموس المصري والأبقار الهولستين

STUDIES ON SUPEROVULATION IN EGYPTIAN BUFFALOES AND HOLSTEIN COWS

ياسر مصطفى السيد الديب

SUMMARY

Embryo transfer technology has now become an important tool in genetic improvement of cattle. Its application in buffaloes, however, has generally met with only limited success due to the lower superovulatory response in the buffaloes compared to that in cattle.

Therefore, the present work aimed to:

- Evaluate the efficacy of several superovulatory regimens to determine the most suitable dose of PMSG for superovulation in buffaloes and cows.
- Compare the superovulatory effect of PMSG alone with that of PMSG plus GnRH and PMSG plus rBST in buffaloes and cows.

A total of ٣٢ buffaloes belonging to Mehallt Mousa farm and ٢٧ Holstein cows belonging to Sakha Animal production Research Institute were used as donor animals. All animals were synchronized with double dose of PGF_{α} ١١ days apart.

الطب الشرعي والسموم

دراسة سمية على الدلتامثرين ودوره فى التلوث البيئي

AN ADVANCED TOXICOLOGICAL STUDY ON DELTAMETHRIN, AND ITS ROLE IN ENVIRONMENTAL POLLUTION

منال متولى عبد المقصود

SUMMARY

Deltamethrin a type II pyrethroid insecticide is one of the most widely used insecticides all over the world, and in Egypt, because of its high potency, but it is also a high environmental pollutant insecticide.

The present study was designed to determine the median lethal concentration LC₅₀, acute toxicity and chronic toxic effects of deltamethrin on blood picture, liver, kidney, pancreatic function, and serum electrolytes levels and histopathology of internal organs as gill, brain, liver, kidney, spleen, intestine, stomach, and testis.

دراسات سمية على تأثير الأفلاتوكسين
في البط مع محاولات لدرء السمية

**TOXICOLOGICAL STUDIES ON THE EFFECT OF
OCHRATOXIN IN DUCKS WITH TRIALS TO ALLEVIATE THE
TOXICITY**

خالد عبد الفتاح محمد الخولي

SUMMARY

The ochratoxins are a group of closely related fungal metabolites produced by various species of *Aspergillus ochraceus* as well as by *Penicillium viridicatum* and certain other *Penicillium* species. Ochratoxin-A is the most toxic of the ochratoxins and is produced in highest yield. Ochratoxin-A causes necrosis of the renal tubular epithelium of the kidney and of periportal liver cells with accompanying enteritis. Recently Maximum Levels (MLs) for Ochratoxin-A have been established in Europe legally. Depending on the products, the MLs vary from ٣ to ١٠ µg/kg (ppb).

The present study was conducted to investigate the deleterious effects of ochratoxin A (١٢ ppb) in duck performances. Also, the effects of ochratoxin A (١٢ ppb) and Oxifarm® (antioxidant contain BHT ٤.٧٤% and BHA ٠.٩٥%), ochratoxin A (١٢ ppb) and Biofarm® (Humate growth promoter contains Humic acid ٣٥% and Fulvic acid ٦%) and ochratoxin A (١٢ ppb) and Bomtofarm® (antimycotoxin contains HSCAS ٢٣.٤% and Ammonium bicarbonate ٢٢.٥%) in duck performances were studied.

بكتريا وفطريات ومناعة

استخدام تفاعل إنزيم عديد البلمرة المتسلسل فى تشخيص عدوى الميكوبلازما فى الأبقار والجاموس فى بعض محافظات الدلتا

THE APPLICATION OF PCR FOR DIAGNOSIS OF MYCOPLASMA INFECTION IN COWS AND BUFFALOES IN SOME DELTA GOVERNORATES

شيرين سامى مصطفى موسى

SUMMARY

Bovine respiratory diseases are the most significant cause of mortality and elimination of calves from feedlots, and have great economic effect on the cattle industry.

Mastitis is of great economic importance in dairy animals which results in reducing milk production or leads to complete destruction of mammary gland. So one of the most important aims in this study is to detect mycoplasma isolates responsible for some respiratory diseases and mastitis in Dakahlia Governorate.

In this study the conventional culture method and PCR as a rapid, sensitive and accurate techniques for the diagnosis of *Mycoplasma* species specially *M. bovis*, as a causative agent for respiratory diseases and mastitis.

٤٨٨ animal were incorporated in this study including ٢٦١ animals (١٤٧ buffaloes, ١١٤ cows) showing signs of respiratory manifestation, and ٢٢٧ animals (١١٨ buffaloes, ١٠٩ cows) showing signs of clinical mastitis.

From buffaloes ٥٨١ respiratory samples were collected (١٤٧ nasal swabs, ١٤٧ tracheal swabs, ١٤١ lymphnode specimens and ١٤٥ lung tissue specimens) and after mycoplasma examination by using culture technique, the number of positive samples were ٣٤ (٢٣.١٪) from nasal swabs, ٤٩ (٣٣.٣٪) from tracheal swabs, ٢٦ (١٨.٤٪) from lymph node specimens and ٦٧ (٤٦.٢٪) from lung tissue specimens with over all ١٧٧ positive samples with incidence of ٣٠.٥ %. Also ٤٤٩ respiratory samples were collected from cows (١١٤ nasal swabs, ١٠٩ tracheal swabs, ١١٢ lymph node specimens and ١١٤ lung tissue specimens) and after mycoplasma examination by using culture technique, the number of positive samples were ٣٧ (٣٢.٤٪) from nasal swabs, ٢٨ (٢٥.٧٪) from tracheal swabs, ٢٦ (٢٣.٢٪) from lymph node specimens and ٥٢ (٤٥.٦ %)

from lung tissue specimens with over all ١٤٣ positive samples with an incidence of ٣١.٨%. So from ١٠٢٩ samples collected from buffaloes and cows showing respiratory manifestation, ٣٢٠ were positive for mycoplasma , with an incidence of ٣١.٠٩ %.

In case of mastitic samples collected from ١١٨ buffaloes, ١٩ animals showing signs of clinical mastitis in one quarter, by mycoplasmal examination , ٦ quarters (٣١.٥%) were positive, ٣٧ animals in two quarters by mycoplasmal examination ٢٢ quarters (٢٩.٧%) were positive, ٥٦ animals affected in three quarters, by mycoplasmal examination , ٥٧ quarters (٣٣.٩%) were positive and ٦ animals showing signs in the four quarters, and ٧ quarters (٢٩.١%) were positive for mycoplasma examination, with overall ٢٨٥ quarters affected , ٩٢ were positive with an incidence of ٣٢.٢% . Also from ١٠٩ cows ٢٨ showing signs of mastitis in one quarter and by mycoplasmal examination ٩ quarters (٣٢.١٤%) were positive, ١٧ affected in two quarters and ١٢ (٣٥.٢ %) were positive, ٣٦ animals affected in three quarters, ٤٧ quarters (٤٣.٥%) were positive ,and ٢٨ showing signs in the four quarters, ٢٦ quarters (٢٣.٢ %) were positive for mycoplasmal examination with overall ٩٤ mycoplasma positive quarters with an incidence of ٣٣.٣% . Application of digitonin test revealed that all isolates were digitonin positive and biochemical identification were applied which classify the isolates into ٣ biogroups , group I (glucose negative , arginine negative and film and spot formation positive) include ٣٩١ isolates from respiratory and milk samples collected from buffaloes and cows , group II (glucose positive , arginine negative and film and spot formation negative) include ٧٧ isolates and group III (glucose negative , arginine positive and film and spot formation negative) include ٣٧ isolates . Serologically Positive samples recovered from nasal swabs collected from buffaloes including (١٩ *M. bovis*, ٨ *M. bovirhinis*, ٤ *M. bovigenitalium* and ٣ *M. arginini*) with an incidence of (٥٥.٨%, ٢٣.٥%, ١١.٧% and ٨.٨%) respectively , from tracheal swabs (٢٦ *M.bovis* , ١٤ *M.bovirhinis*, ٧ *M.bovigenitalium* and ٣ *M.arginini*) with a percentages of (٥٢ % , ٢٨.٥ % , ١٤.٢ % and ٦.١%) respectively , from lymph node specimens (١٧ *M.bovis* , ٥ *M.bovirhinis* , ٣ *M.bovigenitalium* and ١ *M.arginini*) with an incidences of ٦٥.٣ % , ١٩.٢ % , ١١.٢% and ٣.٨ %) respectively and from lung tissue specimens (٤٢ *M.bovis*, ١٣ *M.bovirhinis*, ٨ *M.bovigenitalium* and ٤ *M.arginini*)

with an incidences of (٦٢.٦ % , ١٩.٤ % , ١١.٩ % and ٥.٩ %) respectively

Also positive samples recorded from cows including (١٨ *M. bovis*, ٩ *M. bovirhinis*, ٧ *M. bovigentalium* and ٣ *M. arginini*) from nasal swabs with an incidence of (٤٨.٦%, ٢٤.٣%, ١٨.٩% and ٨.١%) respectively , from tracheal swabs (١٣ *M.bovis* , ٦ *M. bovirhinis*, ٥ *M.bovigentalium* and ٤ *M. arginini*) with an incidences of (٤٦.٤ % , ٢١.٤%, ١٧.٨ % and ١٤.٨ %) respectively, from lymph node specimens (١٤ *M.bovis*, ٥ *M.bovirhini*, ٥ *M. bovigentalium* and ٢ *M.arginini*) with a percentages of (٥٣.٨ % . ١٩.٢ % , ١٩.٢ % and ٧.٦ %) respectively and from lung tissue specimens (٢٧ *M.bovis* , ١٤ *M.bovirhinis*, ٩ *M.bovigentalium* and ٢ *M.arginin*) with an incidences of (٥١.٩ % , ٢٦.٩ %, ١٧.٣ % and ٣.٨ %) respectively

Serologically ٩٢ positive mycoplasma isolates recorded from buffaloes showing clinical mastitis, including (٤٨ *M. bovis*, ٣٠ *M.bovigentalium*, ١١ *M. arginini* a ٣ *M. bovirhinis*) with an incidence of (٥٢.١ % , ٣٢.٦ % , ١١.٩ % and ٣.٢%) respectively and ٩٤ positive mycoplasma isolates recorded from cows showing clinical mastitis including (٥٢ *M. bovis*, ٣٧ *M. bovigentalium*, ٤ *M. arginini* and ١ *M. bovirhinis*) with an incidence of (٥٥.٣%, ٣٩.٣ % , ٤.٢ % and ٢.١ %) respectively .

PCR (polymerase chain reaction) as a rapid , sensitive and accurate technique were applied using two different methods and two *M. bovis* specific primers to make a comparative study between PCR and standard cultural method . By using first method of DNA extraction (phenolic method) and the first primers (the sequence of forward primer was - P٣: ٥` GCA ATA TCA TAG CGG CGA AT ٣` and the sequence of Reverse primer was P٤: ٥` TCT CAA CCC CGC TAA ACA TC ٣` as described by Hotzel *et al.*, ١٩٩٦) out of ٥٠ respiratory samples subjected to cultural method, ١٣ were infected with *M. bovis*, with an incidence of ٢٦ % and ٩ with other *Mycoplasma* spp but PCR technique detected ١٨ *M. bovis* infected samples with an incidence of ٣٦ % , and out of ٤٠ quarter milk samples subjected to cultural method ١١ were infected with *M. bovis* with an incidence of ٢٧.٥ % and ٧ with other, *Mycoplasma* spp, but PCR technique detected ١٦ *M. bovis* infected samples with an incidence of ٤٠ % and results has confirmed that the examined filed isolates were *M. bovis*, by the presence of the specific

single band at ٢٢٧ bp in each of the field isolates and *M. bovis* reference strain.

By using the second method of DNA extraction(thermal method) and the second primers as described by Yleana *et al.*, ١٩٩٥, (the sequence of forward Primer was ٥'- CCT TTT AGA TTG GGA TAG CGG ATG- ٣' and the sequence of reverse primer was ٥'- CCG TCA AGG TAG CAT CAT TTC CTA T-٣') out of ٥٠ respiratory samples subjected to cultural method, ١٤ were infected with, *M. bovis* with incidence of ٢٨ % and ٧ with other *Mycoplasma* spp. but PCR technique detected ١٩ *M. bovis* infected samples with an incidence of ٣٨ %. And out of ٥٠ quarter milk samples subjected to cultural method, ١٦ were infected with *M. bovis* with an incidence of ٣٢ % and ٧ with other *Mycoplasma* spp. but PCR technique detected ٢٤ *M. bovis* infected samples with an incidence of ٤٨%. Results has confirmed that the examined filed isolates tested were *M. bovis*, by the presence of the specific single band at ٣٦٠ bp in each of the field isolates and *M. bovis* reference strains. Antibioqram test was carried on some *M.bovis* field isolates by using growth inhibition test which revealed that oxytetracyclin , gentamycin and enrofloxacin were the most effective antimicrobial agents against *M.bovis* field strains , but polymexin , streptomycin and norexine were the lowest antimicrobial agents against field strains .

تسريح وأجنة

دراسات مورفولوجية علي القناة الهضمية في الحمام و الأوز MORPHOLOGICAL STUDIES ON THE DIGESTIVE TRACT OF THE PIGEON AND GOOSE

حازم شاكر عبد الرحمن حمودة

SUMMARY

The present study was carried out on apparently healthy adult native breeds o both sexes of both pigeon and goose. All parts of the digestive tract of the pigeon and goose were studied gross anatomically and microscopically.

The present study revealed that, the esophagus of both pigeon and goose started at the midline dorsal to the larynx and trachea till reach the level of the ٣rd cervical vertebra and then deviated to the right side of the neck and continues on the right side along its course in the neck region as cervical part of esophagus. Just before the thoracic inlet the esophagus of the pigeon widens to form the bilateral saccular shaped crop and enters the thoracic inlet in the median plane as the thoracic part of esophagus. While in the goose there is no true crop but represented by a spindle-shaped dilatation of the cervical part of the esophagus which extended about ٢ cm within the body cavity.

The thoracic esophagus of the pigeon is connected with the proventriculus without line of demarcation, while in the goose the connection is demarcated externally by a constriction. There are regular longitudinal folds in the mucosal surface of the esophagus and crop. The lining epithelium of the esophagus in both pigeon and goose is stratified squamous epithelium none keratinized. The esophageal mucus glands are present in the thoracic esophagus only in the pigeon, while in the goose the glands are present in the wall of the entire length of the esophagus. The mucus membrane of the crop resembles that of the cervical esophagus in non brooding pigeon, while in the goose the spindle-shaped crop has the same histological structure of the esophagus. In the late stage of the brooding period the lining epithelium of the crop of the pigeon (both sexes) shows high proliferation and the number of the layers of the epithelium increases many times than normal till the hatching time. After hatching and during the period of feeding of youngs the superficial layers

of the lining epithelium of the crop undergo desquamation. The desquamated epithelium enters in the formation of the crop milk which fed by both sexes to the youngs.

The thickness of the superficial layer of the lining epithelium decreased by the time after hatching due to frequent desquamation and the basal layer of the epithelium remains intact.

The stomach of the pigeon and goose consists of two compartments: The proventriculus and the ventriculus which are connected together via the isthmus. The proventriculus appears as a spindle-shaped dilatation in the pigeon and goose and its mucosal surface shows four longitudinal folds and the mucus membrane has macroscopic papillae.

The isthmus appears as a white constriction between the proventriculus and gizzard but its mucosal surface devoid from either proventricular papillae or ventricular cuticle.

The muscular stomach is the largest organ in the body cavity in the studied birds. It has a biconvex lens shape. The ventral contour of the muscular stomach reaches the floor of the abdominal cavity in the goose, while in the pigeon it has a ventral relation to the sternum only. The mucus membrane of the proventriculus shows numerous plicae and sulci and the lining epithelium is simple columnar type. The proventricular gland lobulation appears grossly in the goose and microscopically in both species. The gizzard is lined internally by a hard cuticle which is thicker in the pigeon than in the goose.

The intestinal tract of the pigeon and goose is differentiated into small and large intestines. The small intestine includes the duodenum, jejunum, and ileum, while the large intestine is composed of paired ceca and colon.

The duodenum of the pigeon and goose forms a loop with descending and ascending limbs embracing the pancreas. The ascending limb is the longest and contains the openings of the bile and pancreatic ducts.

The jejunum of the pigeon takes the form of a cone with caudo-ventrally directed apex which is formed by ٣-٤ centrifugal coils and ٢-٣ centripetal ones which encircle each other like a conical shaped disc. In the goose the jejunum is arranged in seven loops parallel to each other and the loops differ in length. The ileum is the terminal and shortest part of the small intestine. It lies between the two long ceca in the goose, but in the pigeon the ceca are very short bud like projections at the connection of the terminal part of the ileum with the colon.

The left cecum is longer than the right one in the studied birds. The colon is the terminal part of the intestinal tract that continues with the ileum cranially and opens in the cloacae caudally.

The mucus membrane of the small and large intestine is characterized by the presence of the villi which take different shapes and may be branched.

The lining epithelium is simple columnar with goblet cells which increase towards the summit of the villi and towards the large intestine.

The intestinal glands present along the whole length of the intestine but increase in the duodenum.

There are many lymphocytic infiltrations in the wall of the digestive tract and become more condensed at the junctions of the different parts of the tract especially at the caudal end of the esophagus forming the so called esophageal tonsils and at the base of the cecum forming the so called cecal tonsils.

تغذية الحيوان والدواجن وامراض سوء التغذية

نواتج تخمر و تقطير الذرة كماده علف لاسماك البطى النيلى
و تأثيرها على ادائها

Corn distiller's dried grain with solubles As A Feedstuff For Tilapia Nilotica And Their Implications On Its Performance

محمد عبد الله محمد موسى

SUMMARY

These experiments were conducted at fish research lab., vet. Med. faculty, Kafrelsheikh University, and lasted for twenty weeks, to investigate the effect of addition of DDGs in *O. Niloticus* diets on performance parameters, body composition, hematological and biochemical changes. This study was designed as two successive experiments, and each experiment lasted for ٧٢ days, as two DDGs inclusion levels (١٠, and ٢٠%) besides control one (٠% DDGs), in the ١st experiment we did not add any additives, while in the ٢nd experiment we added a mixture of xylanase and amylase enzymes (Xylam, Nutrex Comp. Belgium).

Experimental diets were manufactured without steam using a laboratory pellet mill (California Pellet Mill Co., San Francisco, California) with a ٢.٤-mm die.

The trial was designed as completely randomized arrangements for statistical evaluation of data, and diets were assigned randomly with respect to location to five aquarium per diet within the fish rearing laboratory.

Nile Tilapia fish (*Oreochromus Niloticus*) (average individual weight \pm SE, ١٠.٠ ± ٠.٣٧ g) were stocked into ١٥ glass aquaria (٦٠X٤٠X٣٠ cm)

Fish were fed for ٧٢ days on one of three diets formulated to be isonitrogenous (٣١% dietary protein) and isocaloric (٢٩٠٠ kcal of digestible energy per kg diet) and containing different percentages (٠, ١٠, and ٢٠%) of DDGs and followed by second experiment that have the same addition of DDGs but supplemented with a mixture of xylanase and amylase enzymes (Table ٢).

Average weekly morning water temperatures (\pm SE) ranged from $٢٥.٣ \pm ٢.٢^{\circ}\text{C}$, morning DO levels averaged ٦.٤ ± ٠.٨ mg/L, total ammonia-nitrogen averaged ٠.٢٤ ± ٠.٢٠ mg/L, nitrite averaged ٠.٠٠٦ ± ٠.٠١٦ mg/L

L, and pH averaged 8.8 ± 1.0 during these experiments and were within accepted values for growth of *O. Niloticus*.

The growth performance parameters were recorded each twelve days through ٧٢ days (the period of each experiment).

Hemobiochemical changes, whole-body analysis and economical evaluation were done at the end of each experiment.

The results interested in growth performances were demonstrated in Tables ٥ and ٦.

The results concerned with blood picture, biochemistry, whole-body analysis and economical study were examined at the end of each experiment.

قسم الطفيليات

دراسات عن الطفيليات الخارجية لأسماك المياه العذبة بمحافظة الدقهلية

STUDIES ON ECTO-PARASITES OF FRESHWATER FISHES IN DAKAHLIA GOVERNORATE

ريحاب رشاد عبد المجيد

SUMMARY

This study was carried out to reveal the external parasites that infect freshwater fish mainly *Tilapia* spp, *Clarias garipienus* and *Bagrus bayed* collected from different localities in Dakahlia governorate. From ٥١٦ examined ٣١٣ (٦٠.٧%) were infected with external parasites.

It was clarified that the examined fishes were natural host for (٣٠) species of different external parasites identified as:

A. ١٦ monogenetic trematodes were:

١. *Cichlidogyrus arthracanthus*.
٢. *Cichlidogyrus longicornis longicornis*.
٣. *Cichlidogyrus aegypticus*.
٤. *Cichlidogyrus euzeti*.
٥. *Cichlidogyrus tiberianus*.
٦. *Cichlidogyrus tubicirrus magnus*.
٧. *Cichlidogyrus cirratus*.
٨. *Ancylodiscoides notopterus*.
٩. *Eutrianchoratus magnum*.
١٠. *Euryhaliotrema lovejoyi*.
١١. *Heteroncoeleidus buschkieli*.
١٢. *Ancyrocephalus platycephali*.
١٣. *Silonditrema caveryi*.
١٤. *Mizellus indicus*.
١٥. *Quadriacanthus aegypticus*.
١٦. *Quadriacanthus clariadis bagrae*.

B. ١١ Crustaeen parasites were:

١. *Lamproglana monodi* (female).
٢. *Lamproglana monodi* (male).
٣. *Lamproglana pulchella* (female).
٤. *Lamproglana clariae* (female).

٥. *Ergasilus sarsi* (female).
٦. *Paraergasilus rylovi* (female).
٧. *Paraergasilus rylovi* (male).
٨. Copepodit stage (٢ stage) of *Lernae cyprinacea*.
٩. Copepodit stage (٣ stage) of *Lernae cyprinacea*.
١٠. *Grandiunguis promicrops* (male).
١١. Larva of *Chonopeltis inermis*.

C. Protozoa were:

١. *Myxobolus niloticus*.
٢. *Myxobolus dermatobia*.
٣. *Henneguya brahchialis*.

Concerning the seasonal fluctuation of these parasites, the highest prevalence rate was observed in summer (٦٤.٧) followed by winter (٦١.٧%) then autumn (٥٩%) and spring (٥٦.٤%).

The peak of infection with Monogenetic trematodes in *Tilapia spp* was observed in spring (٥١.٦%) followed by summer (٣٠.٣%), then winter (٢٧.٦%) and autumn (٢٣.٣%). While, *Clarias gariepinus* showed the highest infection rate during summer (٢٣.٢%) followed by winter (١٣.٨%) then spring (١٢.٩%) and autumn (٩.٧%). But *Bagrus bayed* had the highest peak of infection during summer (٢٥.٣%), then autumn (١١.٧%), spring (٩.٧%) and not detected in winter.

While, the infection with Crustacea showed the highest prevalence in *Tilapia spp* during autumn (٥١.٣%) followed by summer (٢٣.٢%), then spring (١٦.١%) and winter (١٣.٨) while in *Clarias gariepinus* showed the peak of infection during spring (٣.٢%) followed by summer (٣%), then autumn (٠.٦%) and not detected in winter. But *Bagrus bayed* had its peak of infection during winter (١٧.٢%) followed by summer (١٣.١%) then autumn (١٢.٣%) and not detected in spring.

Protozoal prevalence showed the highest prevalence in *Tilapia spp* during winter (٢٧.٦%) followed by spring (١٢.٩%) then autumn (٣.٩%) and summer (١%). While in *Clarias gariepinus* showed the peak of infection during spring (٩.٧%) followed by summer (٥.١%) then autumn (١.٩%) and not detected in winter. But in *Bagrus bayed* not detected.

Single and mixed infection in fish species was detected. In addition, a morphological description of the collected parasites was carried out in detail.

قسم الفارماكولوجيا

بعض الدراسات الفارماكولوجية على التداخلات الدوائية في الدواجن

PHARMACOLOGICAL STUDIES ON DRUG INTERACTION IN SOME CHICKENS

ميرفت طه حموده حموده

SUMMARY

The present work was carried out to evaluate the efficacy of pefloxacin (١٠ mg/kg b. wt. once daily) , florfenicol (٣٠ mg/kg b. wt. twice daily) and combination of either therapeutic or half therapeutic doses of pefloxacin and florfenicol against experimentally infected broiler chickens with *E.coli* (O^{٧٨}). Moreover, the effect of these drugs on haematological picture, liver and kidney functions as well as histopathological changes were studied.

Two hundreds and ten one - day old broiler chicks were used in this study where they were divided into ٦ equal groups, each of ٣٥ birds.

These groups are :

- Group ١** : non infected non treated (control –ve).
- Group ٢** : infected orally with *E.coli* at ٢٣ days of age (control +ve).
- Group ٣** : infected with *E.coli* at ٢٣ days of age and treated orally with pefloxacin (١٠ mg/kg b. wt.) once daily for ٥ successive days.
- Group ٤** : infected with *E.coli* at ٢٣ days of age and treated orally with florfenicol (٣٠ mg/kg b. wt.) twice daily for ٥ successive days.
- Group ٥** : infected with *E.coli* at ٢٣ days of age and treated orally with combination of pefloxacin (٥ mg/kg b. wt.)once daily and florfenicol (١٥ mg/kg b. wt.) twice daily for ٥ successive days.
- Group ٦** : infected with *E.coli* at ٢٣ days of age and treated orally with combination of pefloxacin (١٠ mg/kg b. wt.)once daily and florfenicol (٣٠ mg/kg b. wt.) twice daily for ٥ successive days.

Blood samples were taken on ٢nd, ٤th and ٥th days during the treatment and at ٧th and ١٤th days post treatment for haematological studies and another blood samples were collected and serum was separated from them to be used for investigation of liver and kidney functions.

دراسة مناعية دوائية على مضادات الكوكسيديا شائعة الاستخدام

فى المجال البيطرى

IMMUNOPHARMACOLOGICAL STUDY ON ANTICOCCIDIALS WIDELY USED IN VETERINARY PRACTICE

على صلاح على سيف

SUMMARY

This study was carried out to study the effect of some drugs on immunity (stimulant or inhibitory) and comparison with coccidial vaccines especially that prepared from *Eimeria tenella*.

In the present work two hundred and forty five mixed sex one day old Arbor Acres FS chicks were divided into ٧ main equal groups:

- **The first group** was kept non infected non treated and served as the negative control group.
- **The second group** was infected and non treated control positive group.
- **The third group** was infected with *E. tenella* (٥٠.٠٠٠ sporulated oocysts/bird) at ٢١ days of age and treated with amprolium ٢٥٠ ppm for ٥ successive days then challenged at ٤٢ days of age with the same dose of *E. tenella*.
- **The fourth group** was infected with *E. tenella* (٥٠.٠٠٠ oocysts/bird) at ٢١ days of age and treated with toltrazuril ٢٥ ppm for ٢ successive days then challenged at ٤٢ days of age with the same dose of *E. tenella*.
- **The fifth group** was treated with ٢٥ ppm semduramicin in the ration from one day old till ٢١ days of age to be challenged at ٢١ days and ٢nd challenge at ٤٢ days of age of chicken.
- **The sixth group** was treated with ١٢٥ ppm clopidol from one day old till ٢١ days of age when challenged and ٢nd challenge at ٤٢ days of age of chicken.

- **The seventh group** was vaccinated with Coccivac B by feed spray at ٣ days of age and infected with *E. tenella* at ٢١ days of age then challenged at ٤٢ days of age.

Faecal samples were collected daily from the ٤th day after ٢nd challenge until ١٠ days post challenge for oocyst count and faecal score examination.

Blood samples were collected (٥ birds/group) weekly. Each blood sample was ٦ ml subdivided into sub-samples. The first subsamples was used for the total and differential leucocytic counts. The second sub-sample was used for serological test (the serum total proteins and protein electrophoretic pattern).

Specimens from caecum were collected from all groups weekly for histopathological examination.

The results of this trial revealed that, amprolium, toltrazuril and Coccivac B vaccine groups recorded the highest immunity index, meanwhile, semduramicin and clopidol treated groups recorded the lowest immunity index.

Toltrazuril, amprolium and Coccivac B treated groups showed a significant decrease in oocysts count as compared with semduramicin and clopidol treated groups.

Toltrazuril, amprolium and vaccinated group with Coccivac B vaccine showed a significant increase in cellular immunity (total leucocytic count and differential leucocytic count). They also increase humoral immunity (total protein and electrophoretic analysis of serum) as compared with semduramicin and clopidol treated groups.

By studying the histopathological results, amprolium, toltrazuril and vaccinated groups recorded the lowest microscopic lesion scores as compared with semduramicin and clopidol treated groups.

دراسات فارماكوديناميكية على التدخلات الدوائية بين عقار كالسيوم فسفومايسين
او جاليبرو وانرواميسين فى بدارى التسمين

**PHARMACOLOGICAL STUDIES ON SOME DRUG
INTERACTIONS**

احمد سعيد حافظ

SUMMARY

Escherichia coli (*E. coli*) infection in poultry industry causing a major economic losses includes high mortality and morbidity rate, loss of body weight and other performance as well as loss in egg production. control of these microbe is an important in poultry farm which depend mainly on the use of certain antimicrobial such as Ca Fosfomycin for treatment of these infection or even probiotic such as Gallipro and Enramycin to avoid hazard effect of these infection on poultry industry.

The present study was conducted to evaluate the effects of Ca Fosfomycin, Gallipro and Enramycin on healthy and experimentally infected chickens with *E. coli* regarding to their effects on clinical signs, mortality rate, performance some hematological parameter, liver and kidney functions as will as histopathological findings.

The experiment was carried out on one hundred and eighty chicks were classified randomly into twelve groups, 15 chicks each and kept separately using wooden chick partitions. The chicks were reared in a complete block design, provided with wood shaving litter, plastic feeders and water troughs. The birds were fed on a starter ration for the first two weeks, on a grower ration for the next two weeks and then on finisher ration till the end of experiment.

قسم الفيروسات

**تقييم كفاءه لقاح مثبت لمرض الاسهال الفيروسي البقري المحتوى على النوع
الجيني الأول والثاني**

EVALUATION OF INACTIVATED BOVINE VIRAL DIARRHEA VACCINE COMPRISING GENOTYPE I&II

السيد محمود داود

SUMMARY

Bovine viral diarrhea virus is economically important pathogen of cattle through the world. The present study was planned for preparation, evaluation inactivated bovine viral diarrhea virus vaccine contained genotype I&II and comparative with inactivated pneumo-3 vaccine contained BVDV,IBRV and PI-3V.

Vaccine prepared through propagation of the BVDV genotype I&II in madine derby bovine kidney cell culture (MDBK) and used BAI for inactivation at ٠.٠٢% concentration for ٦ hours at ٣٧°C. add ٢٠% alhydrogel as adjuvant.

قسم كيمياء حيوية

بعض الدراسات الكيميائية الحيوية على السائل المنوي في الخرفان تحت التأثير الموسمي

SOME BIOCHEMICAL STUDIES ON RAM SEMEN UNDER THE EFFECT OF SEASONS

وليد فؤاد رزق عبد العزيز

SUMMARY

The present work was carried out at small ruminant unit, Sakha Experimental farm, animal production research institute, Agriculture Research Center, Ministry of Agriculture, at north Delta Nile in Egypt. The whole experiment started from January until to the December ٢٠٠٥. The experiment was carried out in this farm.

Ten adult rams aged ٢.٥- ٣ years of crossed bred Finnish (F) X Rahmani (R), the average body weight of rams was ٧٢ ± ٥ kg. All animals were apparently healthy, free from mange and external parasite, experienced, sexually fit, trained in artificial insemination and used in semen-production unit in the farm. All rams were maintained in sound breeding condition during whole experimental period with follow up veterinary medical observations.

The weekly blood samples ere collected from jugular vein of rams. Semen samples were collected and seminal plasma was separated. The whole year study of the reproductive performance of adult rams (٢-٣ years old) which includes semen (physical characteristics and biochemical constituents) .