



# The Lesion

A Biannual Newsletter of Indian Association of Veterinary Pathologists

Volume 2, No. 2

October, 2010

## ASSOCIATION NEWS

### **Proceedings of First Annual Convention of Maharashtra Chapter of Indian Association of Veterinary Pathologists and National Symposium on Advances in Avian diseases and Toxicopathology held on April, 19, 2010**

The First Annual Convention of IAVP (Maharashtra Chapter) and "National Symposium on "Advances in Avian diseases and Toxicopathology" was organized by Department of Veterinary Pathology, K.N. Patil College of Veterinary Science, Shirwal (Maharashtra) on April, 19, 2010 with great success and overwhelming response. About 170 pathologists/delegates from diverse fields of poultry industry, pharmaceutical research & development, biotechnology, toxicology, state government and academics participated in the event.

The Convention and Symposium were inaugurated by Dr. A. S. Ninawe, Hon. Vice Chancellor, MAFSU, Nagpur in the gracious presence of Chief Guest Dr. Lal Krishna, former Animal Husbandry Commissioner, GOI and President, IAVP. Dr. A. S. Ninawe during his inaugural speech addressed the issue of emerging and re-emerging diseases in poultry and pressed on



need of adoption of modern managerial practices, preventive measures, advanced diagnostics and medication. Dr. Lal Krishna in his guiding speech emphasized on the need of special attention on emergence of certain diseases never encountered in country before due to liberalization and climate change. The Souvenir and the proceedings of the Symposium were released by Dr. Lal Krishna. Three renowned Veterinary Pathologists, namely, Dr. P. S. Lonkar, Dr. P. D. Sardeshpande and Dr. S. S. Bhagwat, who served the college and university in various capacities were felicitated by Dr. Lal Krishna under the banner of IAVP chapter. Dr. B. K. More, the Organizing Secretary conducted the inaugural function and Dr. V. S. Dhaygude, Treasurer, proposed the vote of thanks. There were two technical sessions; the first on poultry and emu diseases was chaired by Dr. S. S. Bhagwat, and the second on toxicopathology was chaired by Dr. P. D. Sardeshpande. Eight lead papers were presented by eminent speakers in these sessions. The poster session was chaired by Dr. M. C. Prasad. General Body meeting of the Maharashtra Chapter was held in the evening under the Chairmanship of Dr. P. S. Lonkar. New Executive body was unanimously elected with Dr. M. V. Joshi as the President, Dr. N. V. Kurkure as the Secretary and Dr. D. P. Kadam as the Treasurer. It was resolved to strengthen the activities of the Chapter, to collect Rs. 500/- from each member to form corpus fund for undertaking the activities of the association and to conduct the regular seminars of the association for enriching the knowledge of the members.

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## **Zonal Meetings of IAVP**

Zonal conferences of the West Zone and South Zone are scheduled to be held at Mumbai on 23 April 2011 and Pookot on 30<sup>th</sup> April 2011, respectively. We extend our best wishes to Zonal secretaries for successful organisation of event. Kindly visit [www.iavp.org](http://www.iavp.org) for more details.

**Secretary General**

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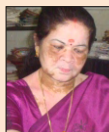
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## AWARDS/HONOURS/RECOGNITION

**Dr. Rajveer Singh Pawaiya**, Principal Scientist (Veterinary Pathology) at Central Institute for Research on Goats, Makhdoom and Editor of our journal IJVP, has proceeded on one year foreign assignment of Post Doctoral Fellowship at Pathobiology Academic Program, School of Veterinary Medicine, St. George's University, Grenada (West Indies). He will be primarily doing research on animal cancer and also teaching pathology to DVM and MSc (Pathology) students.



## Notice for the Annual General Body Meeting 2011

The next annual conference and the annual General Body meeting of the Indian Association of Veterinary Pathologists (IAVP) would be conducted at the College of Veterinary Sciences, Hyderabad- 500030, on 19<sup>th</sup> October 2011. The election of Office-bearers for the next term of the Executive Committee will be held at that time. For details of schedule and venue, please visit the official web site of the IAVP ([www.iavp.org](http://www.iavp.org)). All members are requested to attend the meeting. Agenda notes if any should be forwarded to the Secretary General before 30<sup>th</sup> September, 2011.

**Secretary General**

## INDIAN COLLEGE OF VETERINARY PATHOLOGISTS (ICVP)

(Under the aegis of Indian Society for Certification of Veterinary Pathologists, Registered under Societies Registration Act 1860)

### ANNOUNCEMENT OF ANNUAL BOARD CERTIFICATION EXAMINATION-2011

**Indian College of Veterinary Pathologists ICVP announces its Annual examination to be held on 10<sup>th</sup> & 11<sup>th</sup> September 2011 in Madras Veterinary College Chennai.** The detailed guidelines can be seen on [www.icvp.in](http://www.icvp.in). **The last date of application for examination is 30<sup>th</sup> April, 2011.** Those desirous of joining training with ICVP Diplomate can do so by filling in the relevant application as per the details provided on the website. The exam will be conducted in the 2<sup>nd</sup> week of September every year.

**The broad eligibility criteria includes:** 1. A Graduate in Veterinary Sciences and registered with the Veterinary Council of India, 2. a Life Member of IAVP, by virtue of specialization (Master or Ph.D.) in the subject of Veterinary Pathology, 3. Completed at least three calendar years of supervised training after Master in Veterinary Pathology under the supervision & direction of Diplomate of the Indian College of Veterinary Pathologists as detailed in the application (The training may be conducted simultaneously with Ph. D. program in Veterinary Pathology) OR the candidate must have five years full time exposure in Veterinary Pathology (after acquiring post-graduate qualification), including a minimum period of one calendar year of training under the supervision of a Diplomate of the Indian College of Veterinary Pathologists OR **Until the year 2012, a candidate with ten years of full time exposure of practicing Veterinary Pathology (whether institutional/industrial) without insisting on the requirement of Ph.D qualification as detailed in the application and having the application supported (signed) by the Diplomate of ICVP.**

The College shall award a 'Diplomate Certificate' in 'Veterinary Pathology' to all those who successfully complete the examination. The certificate holders may use the title Diplomate ICVP or DICVP, if they wish, after their name provided they maintain the membership of the College in good standing.

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### Indian College of Veterinary Pathologists (ICVP) Representatives Attended ACVP Meeting at Baltimore, USA

The representatives of ICVP (Prof. Vipin K Gupta, Secretary and Dr TV Anilkumar, Chair Examination) sponsored by the College attended 61<sup>st</sup> Annual meeting of the ACVP on specific invitation and had deliberations with their Executive Council on the development of the Veterinary Pathology in India, explicitly the Indian College of Veterinary Pathologists during their meeting held at Baltimore, USA, from 30<sup>th</sup> October-3<sup>rd</sup> Nov.

2010. President ACVP Prof. Michael D. Lairmore, invited representatives of ICVP through President of ICVP by offering complementary registration. The representatives had discussion with the ACVP executive council including the President-Elect Dr Derek Mosier for 30 minutes while presenting the development of veterinary pathology in India and progress of the ICVP towards international recognition.

The ICVP delegation also met their European (Dr Flavio M. Crameri & Dr Cinzia) and Japanese (Prof. Toshiharu Hayashi) counterparts during ACVP VVIP dinner and shared the information about their college activities. ICVP, ACVP, ECVP & JCVP representatives expressed interest to exchange their representatives to each others Colleges' Annual Meetings and barter on the activities thereby paving the way for mutual recognition and international harmonization.



Secretary, ICVP



## *Escherichia coli* serotype O84 as a potential emerging pathogen colibacillosis in captive-bred Western Tragopan (*Tragopan melanophagus*)

Vikram S. Vashist and Sandeep Rattan<sup>1</sup>

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### ABSTRACT

Avian colibacillosis refers to any localized or systemic infection caused by avian pathogenic *Escherichia coli* (APEC), including colisepticemia, coligranuloma (Hjarre's disease), air sac disease (chronic respiratory disease, CRD), coliform cellulitis, swollen-head syndrome, coliform peritonitis, coliform salpingitis, coliform osteomyelitis/synovitis (turkey osteomyelitis complex), coliform panophthalmitis and coliform omphalitis/yolk sac infection. The present study reports the role of *E. coli* serotype O84 as an emerging pathogen in causing colibacillosis in captive-bred Western Tragopan: *Tragopan melanophagus* (Local name-Jujurana, State Bird of Himachal Pradesh). Four out of twenty four birds bred in captivity at Wildlife Phesantry-Sarahan, Shimla, H.P. succumbed with signs of diarrhoea, soft shell eggs and egg-bound conditions. Gross lesions included pleuritis, lung oedema, fibrinous pericarditis, severe-diffuse fibrinous peritoneal adhesions, serositis, and thickened air sacs / air-sacculitis (Fig.1). Caeca of all affected birds were impacted with greenish mucoid contents. Genital lesions were characterized by prolapsed cloaca with impacted fractured egg, vaginitis, egg-binding and internal laying (Fig.2). The vaginal mucosa was markedly thickened, ulcerated, and covered with a diphtheritic, caseonecrotic membrane. Swabs from pericardial sac, liver, lungs and intestines yielded *E. coli* serotype O84 (courtesy Central Research Institute, Kasauli). Surveys have been made in many parts



Fig.1. Fibrinous adhesions-Serositis



Fig.2. Vaginitis and internal laying

of the world to determine serotypes most frequently associated with diseases caused by *E. coli*. Variations according to geographic region occur, but in most studies the common serotypes have been O1, O2, O35, and O78. Many other serotypes have been reported less frequently, and some pathogenic isolates do not belong to known serotypes or are untypeable. This study suggested that this might signal the emergence of new pathogenic serotypes of APEC.

## Role of nitric oxide in pathogenesis of rabies

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Rabies is a fatal viral disease of mammals causing non-suppurative encephalitis. Despite the dramatic and severe clinical neurological signs in rabies, the neuropathological findings under natural conditions are relatively mild and degenerative neuronal changes are not prominent. Now, it has been advocated that clinical signs in rabies are due to neuronal dysfunction, either due to action of acetylcholine receptors, or nitric oxide (NO) or due to apoptosis or necrosis. NO may play a role in blood brain barrier leakage and may contribute to tissue damage due to generation of peroxynitrate, which initiates synthesis of non-specific proteins and lipid peroxidation and induce neuronal cell death by apoptosis. To elucidate the role of NO, studies were conducted in groups of Swiss albino mice: first group (GI) was inoculated with rabies Challenge virus standard (CVS) intracerebrally, the second group (GAI) with both CVS intracerebrally and aminoguanidine (iNOS inhibitor) intraperitoneally and the third (GA) and fourth (GC) groups, respectively, acted as aminoguanidine and PBS controls. The clinical signs of rabies such as ruffled fur, tremors, in-coordination, paralysis and prostration were observed in both infected groups. Nitric oxide levels in the serum showed high concentration in the group GI alone and very low concentrations in other groups including GAI (Fig.1A). This was further substantiated by the real-time PCR results showing up-regulation of iNOS mRNA in brain of infected group (Fig.1B). Also high levels of NO in serum and iNOS mRNA expression in brain in GI than in GAI group correlated with greater pathological changes of rabies in GI in comparison to GAI group. Thus, our results suggest that NO contribute to pathogenesis of rabies through apoptosis or by its destructive effects through peroxynitrate in mouse.

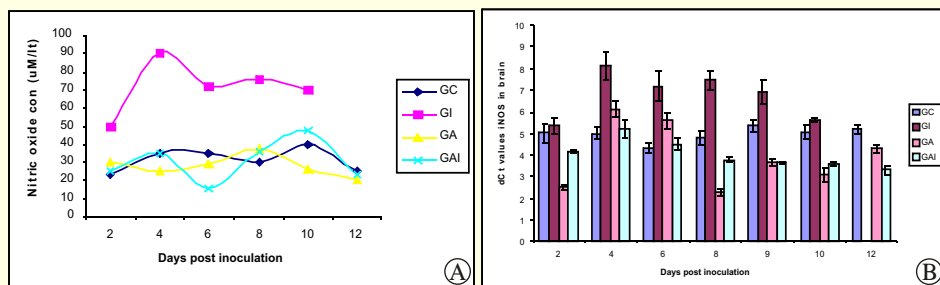


Fig. 1. Nitric oxide concentration in serum (A) of adult Swiss albino mice and iNOS mRNA expression (B) inoculated intracerebrally with Challenged Virus Standard (CVS) @100 LD50/ mouse and intraperitoneally with Aminoguanidine @600mg/kg of mice. The concentration of nitric oxide in serum and iNOS mRNA in brain was found significantly higher in GI than that of GAI, GA and GC.