

# The Lesion

A Biannual Newsletter of Indian Association of Veterinary Pathologists

Volume 8, No. 1 & 2

January and July 2018 Joint Issue

## In this issue :

- From President's Desk
- XXXV IAVP Congress
- Research Paper Abstract
- Case Report
- IAVP International Conference
- IAVP Regional Seminar
- Awards & Honors
- Appointments
- Books Published
- Superannuations
- Obituary
- EC of IAVP /ICVP

## Editors

Dr R. Somvanshi  
Dr K.P. Singh  
Dr M. Saminathan

## From President's Desk ...



We met at Asian Veterinary Pathology Congress held at Veterinary College-Hebbal, Bengaluru, on 09-11th November 2017 and witnessed very successful Asian Veterinary Pathology Congress. Organizing Secretary Prof. H.D. Narayanaswamy and his team deserves our heartiest congratulations. New issues of IJVP are in our hand with quality research publications and better impact factor. Chief Editor Dr R.V.S. Pawaiya and Dr K.P. Singh, Secretary General and their team deserve our full support, high appreciation and congratulations. IAVP website is regularly updated and given new illustrative and attractive look. ICVP Board Examination 2018 has been conducted successfully at Palaampur, HP. It is matter of great proud to us that two of our colleagues Dr H.D. Narayanaswamy and Dr C. Balachandran have been selected as Vice Chancellors of KVAFSU, Bidar and TANUVAS, Chennai, respectively. One day seminar was organized by IAVP Guwahati Chapter in befitting manner. You are requested to find some time for the activities of IAVP and join ICVP through Board Certification Examination. It is matter of immense pleasure that XXXV Veterinary Pathology Congress, 2018 and IX Annual Meeting of Indian College of Veterinary Pathologists is being organized on 22nd-24th October, 2018 at Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar, Dantiwada, Gujarat. Dr D.V. Joshi, Dr B.J. Patel and their team is making very sincere efforts for organization of successful Congress. We are eagerly looking forward for fruitful deliberations and outcomes in forthcoming Congress. I welcome all veterinary pathologists, delegates, students and guests and wish the organizers for a grand successful organization of Veterinary Pathology Congress.

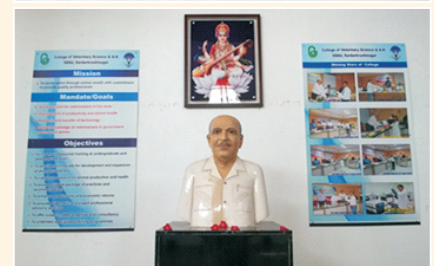


R. Somvanshi

## Venue of XXXV IAVP Congress: Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, SDAU, S.K. Nagar, Dantiwada, Gujarat

The Department of Pathology was established in August, 1982 in the newly established second Veterinary College in the Gujarat state at Sardarkrushinagar Campus. The Department is endowed with highly qualified faculty members and fully equipped laboratories. Founder Professor & Head was Dr P.L. Kaul while recent Past Head is Dr D.V. Joshi, present Principal of College. Presently, Department is chaired by Professor and Head Dr B.J. Patel. The present staff position is One Professor, 3 Assistant Professors, one Laboratory Technician and two Junior Research Fellows under Departmental Plan Scheme. The Department aims to discharge following duties:

1. To impart Under Graduate teaching as per VCI course curriculum
2. To impart/practical training on various aspects of post mortem examinations, biopsy, histopathology, hematology, urine analysis, diagnostic cytology and enzymology
3. To impart/offer post graduate programme both at MVSc and PhD levels
4. To render disease investigation and diagnostic services to the field, university farm and college clinics to ascertain the mortality and morbidity losses and to advocate control measures
5. To provide spot diagnosis and advisory services to the poultry farmers of the region



6. To conduct the refresher courses for the field veterinarians of the State Government, Department of Animal Husbandry
7. To conduct research in animal and poultry diseases
8. To publish the scientific achievements

Department has published 126 Research Papers, 122 Papers were Presented in National/International Seminar/Symposia/Workshops, published 06 Practical Manuals, 03 Books/Book Chapters/Booklets published 11 Popular articles and organized 03 Seminars. It has completed Plan and Non Plan Schemes-ICAR *ad hoc* research scheme on "Dynamics of fluoride occurrence in relation to fluorosis in animal health in semi-arid zone of north Gujarat (2001-2004). Schemes findings/recommendations for field veterinarians/farmers were-The most recognizable, indexed and early sign of fluorosis recorded was dental fluorosis being the highest in Mehsana followed by Patan and Banaskantha districts. Veterinarians should specifically look to such teeth lesions so as to advise to farmers to prevent further progress of fluorosis by giving good quality/defluorinated water.

Another Scheme completed was-Studies on epizootiology and pathology of lamb mortality under semi-arid climatic conditions of North Gujarat (1996-2000). Research findings in relation to age, sex, season and disease revealed high mortality (40.34%) in pre-weaners as compared to post weaners (59.66 %). Season-wise proportional lamb mortality revealed maximum mortality (46.02%) in winter followed by monsoon (32.20 %) and summer (21.78%). The 3 leading pathological conditions responsible for lamb mortality included pneumonia, enteritis and pneumo-enteritis. In addition to aforementioned projects; Departmental Project entitled Patho-epidemiology of animal neoplasms in semi-arid zone of North Gujarat was also completed. Two Plan scheme are in progress. These include-"Establishment of biomonitoring centre for animal health hazard caused by environmental pollutants (B.H.-12953-03)" and "Fisheries Research through FFDA (B.H.-12112140-01)".

## CHIEF PATRON, ORGANIZING COMMITTEE

**Prof. (Dr) Ashok Ambalal Patel**, BSc (Agri); MSc (Agri); PhD (Agri), Hon'ble Vice Chancellor, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar, Gujarat, India is Chief Patron, Organizing Committee, XXXV Veterinary Pathology Congress, 2018.



## CHAIRMAN, ORGANIZING COMMITTEE

**Dr D.V. Joshi**, MVSc and PhD (Veterinary Pathology), Principal / Dean, College of Veterinary Science and Animal Husbandry, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar, Dantiwada, Gujarat, India is Chairman Organizing Committee, XXXV Veterinary Pathology Congress, 2018.



## MEET YOUR ORGANIZING SECRETARY: PROFESSOR B.J. PATEL

**Dr B.J. Patel**, Organizing Secretary, 35th Veterinary Pathology Congress, 2018 is Professor and Head, Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar, Dantiwada, Gujarat. He did his graduation and post-graduation in Veterinary Pathology from College of Veterinary Science and Animal Husbandry, Gujarat Agricultural University, Dantiwada, S.K.Nagar in the year 1986 and 1989, respectively. He obtained PhD degree from College of Veterinary Sciences, GBPUAT, Pantnagar in the year 1996. During PhD programme he was awarded ICAR Senior Research Fellowship. He has total 33 years of professional experience and served the University on different posts-viz. Junior Lecturer to currently Professor and Head of the Department. He received 17 medals/awards including IAVP-Best Toxicopathologist Award, 2014 for his scientific contributions. Till date he has guided 20 MVSc students and 1 PhD student. Currently 2 MVSc students are pursuing their post graduate degrees under his guidance. He had published more than 70 research papers in national and international peer reviewed journals. Beside this, presently he is also working as a main nominee, link nominee, scientist from outside the institute, inspection committee member for Large Animal Facility for CPCSEA.



## Research Paper Abstract

Anjaneya\*, K.P. Singh\*, S. Cherian<sup>†</sup>, M. Saminathan<sup>†</sup>, R. Singh<sup>†</sup>, M. A. Ramakrishnan<sup>†</sup>, S. Maan<sup>×</sup>, N. S. Maan<sup>×</sup>, D. Hemadri<sup>‡</sup>, P. P. Rao<sup>‡</sup>, K. Putty<sup>‡</sup>, Y. Krishnajyothi<sup>‡</sup> and P. P. Mertens<sup>‡</sup> (2018). Comparative neuropathology of major Indian Bluetongue virus serotypes in a neonatal BALB/c Mouse model. *J. Comp. Path.*, 162: 18-28 Elsevier; Impact Factor: 3.457

Bluetongue virus (BTV) is neurotropic in nature, especially in ruminant fetuses and *in-utero* infection results in abortion and congenital brain malformations. The aim of the present study was to compare the neuropathogenicity of major Indian BTV serotypes 1, 2, 10, 16 and 23 by gross and histopathological lesions and virus distribution in experimentally infected neonatal BALB/c mice. Each BTV serotype (20 ml of inoculum containing  $1 \times 10^{50}$  tissue culture infectious dose [TCID]<sub>50</sub>/ml of virus) was inoculated intracerebrally into 3-day-old mice, while a control group was inoculated with mock-infected cell culture medium. Infection with BTV serotypes 1, 2 and 23 led to 65-70% mortality at 7-9 days post infection (dpi) and caused severe necrotizing encephalitis with neurodegenerative changes in neurons, swelling and proliferation of vascular endothelial cells in the cerebral cortex, cerebellum, midbrain and brainstem. In contrast, infection with BTV serotypes 10 and 16 led to 25-30% mortality at 9-11 dpi and caused mild neuropathological lesions. BTV antigen was detected by immunohistochemistry, direct fluorescence antibody technique and confocal microscopy in the cytoplasm of neuronal cells of the hippocampus, grey matter of the cerebral cortex and vascular endothelial cells in the midbrain and brainstem of BTV-1, -2, -10, -16 and -23 infected groups from 3 to 20 dpi. BTV nucleic acid was detected in the infected brain tissues from as early as 24 h up to 20 dpi by VP7 gene segment-based onestep reverse transcriptase polymerase chain reaction. This study of the relative neurovirulence of BTV serotypes is likely to help design suitable vaccination and control strategies for the disease.

\*Centre for Animal Disease Research and Diagnosis, <sup>†</sup>Division of Pathology, ICAR-Indian Veterinary Research Institute, Izatnagar, 243 122, Bareilly, Uttar Pradesh, <sup>‡</sup>ICAR-Indian Veterinary Research Institute, Regional Station, Mukteswar, Uttarakhand, <sup>×</sup>LLR University of Veterinary and Animal Sciences, Hisar, Haryana, <sup>v</sup>National Institute of Veterinary Epidemiology and Disease Informatics, Bengaluru, Karnataka, <sup>k</sup>Ella Foundation, Hyderabad, Telangana, <sup>USPVNR</sup> Telangana Veterinary University, Hyderabad, Telangana, <sup>†</sup>Veterinary Biological and Research Institute, Vijayawada, Andhra Pradesh, India and School of Veterinary Medicine and Science, The University of Nottingham, UK

## CASE REPORT

### *Streptococcus suis* infection in a crossbred pig: A case report

Seema R. Pegu, S. Rajkhowa, K. Saikia, S. Neher, M. Choudhury and N.J. Deka  
ICAR-National Research Centre on Pig, Rani, Guwahati, 781131 Assam

*Streptococcus suis* infection is an important disease in intensive, indoor swine operations. It is the most common cause of meningitis in pigs. *Strep. suis* is a bacterium living in the tonsils of most of pigs and capable of causing meningitis and septicemia. *Strep. suis* is most often associated with meningitis and other manifestations caused by it includes polyserositis, arthritis, valvular endocarditis, myocarditis, pericarditis and abortion. It is also considered a secondary causal agent of pneumonia. Condition is reported from India by several workers (Sahoo, 2017). The prevalence of *Strep. suis* infection and associated pathological lesions in pigs were studied in 100 pigs of Bareilly, UP. *Strep. suis* isolates were confirmed by colony characteristics, biochemical profiles and PCR using primers specific to 16S rRNA gene. *Strep. suis* was isolated from 9 pigs with pathological lesions in lungs (5), brain (3) and tonsil (1). Pathogenicity testing in mice revealed that 3 of the 9 isolates (2 lungs and 1 brain samples) were pathogenic to mice. The study revealed that there was 9% prevalence of *Strep. suis* infection associated with pathological lesions in slaughtered pigs in Bareilly city (Prakash *et al.*, 2016). A case of *Streptococcus suis* disease is reported from North-Eastern Region of India which is a hub of pig farming in India.

A 3 months old crossbred female pig from an organized Pig Farm of Kamrup, Assam, with a history of clinical symptoms of respiratory distress, off-fed, weakness, in coordination of gait and high rise of temperature was subjected for diagnosis and investigating possible cause of death. On necropsy examination, the notable gross

pathological lesions recorded were fibrinopurulent pericarditis with strands of fibrous tissue adhering to the epicardium and hydropericardium in the heart (Fig.1), fibrinous pneumonia and fibrinous pleuritis in the lung and meningoencephalitis in the brain (Fig.4). The predominant microscopic lesions were fibrinous pericarditis (Fig.2), fibrinous pneumonia and intra alveolar hemorrhage in the lung (Fig.3). Brain showed encephalitis with neuronophagia (Fig.5) and perivascular cuffing (Fig.6).

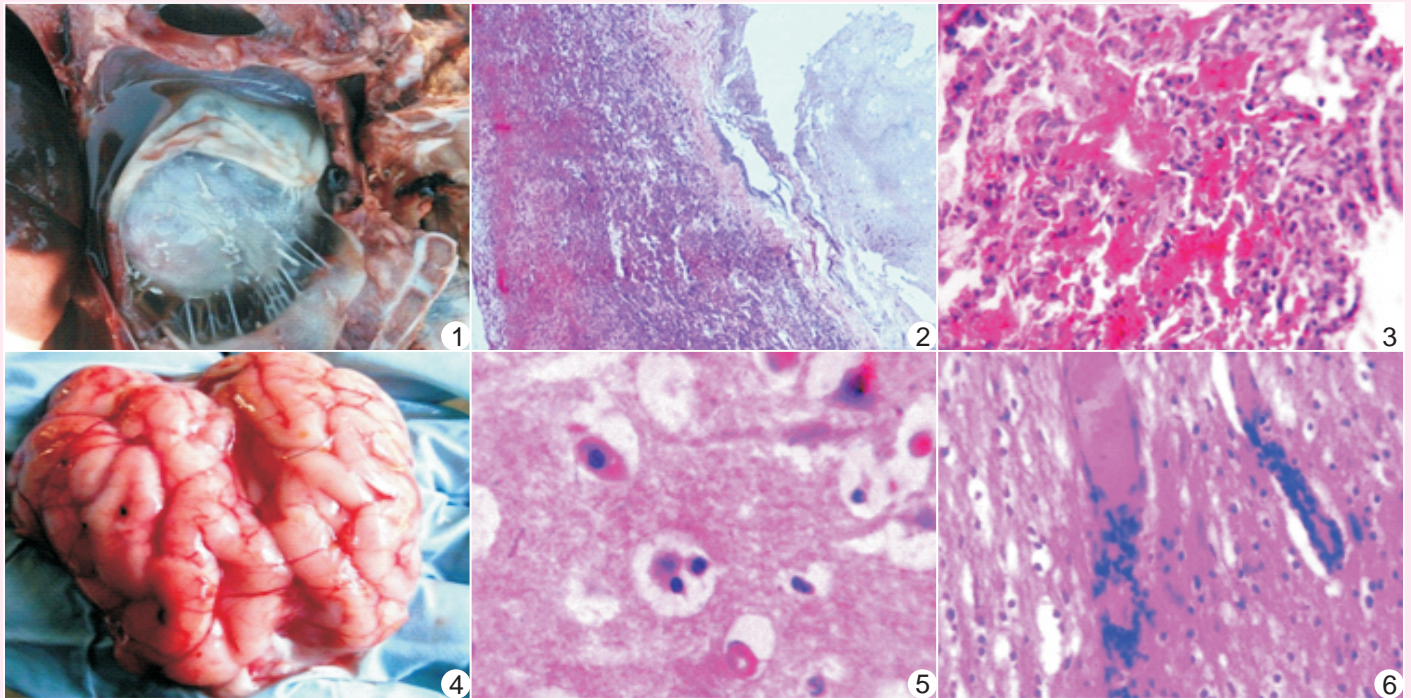


Fig.1: Fibrinopurulent pericarditis with strands of fibrous tissue adhering to the epicardium and hydropericardium in the heart  
 Fig.2: Thickening, edema and neutrophilic infiltration in pericardium. H & E X 20  
 Fig.3: Intra alveolar hemorrhage in the lung. H & E X 40  
 Fig.4: Engorged meningeal blood vessels and edema in the brain  
 Fig.5: Perineuronal edema and neuronophagia in the brain. H & E X 100  
 Fig.6: Perivascular infiltration in the brain. H & E X 100

Definitive diagnosis of this ailment is made by isolation and typing of *Strep. suis* bacterium from affected organs. Clinical signs and post-mortem findings are helpful but not specific. One of the best way to obtain a definitive diagnosis is to culture tissues (depending on clinical signs: brain, joints, lungs, spleen, etc.) from affected or dead pigs. An antibacterial susceptibility test is performed on organisms isolated from an affected, untreated pig identifies the most effective treatment. Serotyping should be done on isolated colonies to establish the importance of a specific serotype in a herd (Gottschalk 2013).

In present case, on the basis of the distinct pathological lesions and detection of the presence of *gdh* gene by PCR from *Strep. suis* isolated from lung and pericardial fluid; the case was diagnosed as *Streptococcus suis* infection in the crossbred pig. So far 35 different types of *Strep. suis* have been identified. Some types of *Strep. suis* also affect humans (mainly serotypes 2 and 14), producing septicemia, meningitis and septic shock. Meat industry workers are at greatest risk but farmers, veterinarians, food preparers and anyone else who handles uncooked pork or is in contact with live and mainly, ill pigs may also be exposed. Butchers and others become infected through cuts and abrasions while handling and cutting pig carcasses. Human cases have been reported in most of countries with an important pork industry, including US and Canada. The ailment may manifest itself as a "flu-like" disease followed by meningitis. Sixty per cent of the human cases that recovered have permanent hearing loss (Gottschalk 2013).

## References

- Gottschalk, M. (2013). *Streptococcus suis* disease in pigs. The Pig Site. [www.thepigsite.com/articles/4385/streptococcus-suis-disease-in-pigs](http://www.thepigsite.com/articles/4385/streptococcus-suis-disease-in-pigs)  
 Prakash, A., Kumar Ram, Anoopraj, R. and Saikumar, G. (2016). *Streptococcus suis* infection in slaughtered pigs and its association with pathological lesions in the lungs, brain and tonsils. *Indian J. Vet. Pathol.*, 40(2):133-138 DOI: 10.5958/0973-970X.2016.00029.8  
 Sahoo, M. (2017). *Streptococcus suis* infections in pig: Prevalence, pathology and molecular studies. Research Project, Division of Pathology, ICAR-IVRI, Izatnagar, UP

## Technical Report of Asian Veterinary Pathology Congress, 2017 Organized at Department of Veterinary Pathology, Veterinary College-Hebbal, KVAFSU, Bengaluru

**Dr H.D. Narayanaswamy\***

Organizing Secretary and Professor

Department of Veterinary Pathology, Veterinary College, KVAFSU, Hebbal, Bengaluru

Department of Veterinary Pathology, Veterinary College-Hebbal, Bengaluru organized, Asian Veterinary Pathology Congress, 2017 and an International Symposium on 'Emerging horizons in diagnosis of animal and poultry diseases-Towards sustainable production in Asian countries', along with XXXIV Annual Conference of Indian Association of Veterinary Pathologists (IAVP), VIII Annual Meeting of Indian College of Veterinary Pathologists (ICVP) and VIII Biennial Meeting of Asian Society of Veterinary Pathology (ASVP) on 09-11th November, 2017. This grand event was organized in association with IAVP, ICVP and ASVP, in the Auditorium of Karnataka Veterinary Council, Hebbal, Bengaluru. Dr H.D. Narayanaswamy, Professor, Department of Veterinary Pathology was the Organizing Secretary for the event in which 300 delegates from all over India and 25 delegates from different Asian countries-like Vietnam, Malaysia, Thailand, Republic of Korea, Taiwan, Philippines and USA participated.

A grand inaugural function on 09.11.2017 had marked the beginning of three days International Congress. Prof. R.V. Prasad, Vice Chancellor of KVAFSU was the Chief Guest, while Prof. R. Somvanshi, President of IAVP presided over the function. Dr S.N. Vinay Babu, CEO & Managing Director of Bioneds India Pvt. Ltd., Bengaluru, Prof. Placid E.D' Souza, Dean of Veterinary College-Hebbal, Bengaluru and Dr T.V. Anilkumar, President of ICVP & ASVP were the Guests of Honor. In the welcome speech, Organizing Secretary Prof. H.D. Narayanaswamy addressed the gathering and appreciated the IAVP members and students for their interest and active participation in the conference. Chief Guest, Prof. R.V. Prasad congratulated the Organizing Committee for their efforts and insisted the need for development of rapid diagnostic tests that can enable the detection of multiple etiological agents at field level. Dr S.N. Vinay Babu stressed the significance of veterinary pathology in animal health management and disease diagnosis and appreciated the theme that was chosen for the conference. Prof. Placid E. D' Souza in his address raised concern for the growing trend of Veterinary Pathologists inclining towards molecular techniques, departing from their basic and conventional principles. Report of IAVP was presented by Secretary General IAVP Dr K.P. Singh which revealed positive growth of IAVP. Dr T.V. Anilkumar briefed about aims and activities of ASVP and ICVP. In his Presidential speech, Prof. R. Somvanshi narrated importance of role of Veterinary Pathologist in rapid diseases diagnosis. He stressed that pathologists should not leave any stone unturned for the cause of their profession. During the inaugural function, 3 eminent retired pathologists of Veterinary College-Hebbal, Bengaluru - Professors R.N. Sreenivasa Gowda, S. Vijayasarithi and T.S. Nalini, were felicitated by the Chief Guest and other dignitaries, for their outstanding contribution and services towards the advancement of Veterinary Pathology. On this occasion, all four IJVP Awards, 2016, IAVP President Best Worker Award to Dr Rajendra Singh and IAVP Fellowships were awarded to Dr (Mrs.) Ch. Srilatha, Dr G.A. Balasubramanian and Dr R.V.S Pawaiya. Compendium of Asian Veterinary Pathology Congress, 2017 was released by the dignitaries on dais. Inaugural function was concluded with vote of thanks by Prof. M.L. Satyanarayana, Head, Department of Veterinary Pathology, Veterinary College, Bengaluru.

The three days conference was scheduled as 13 Technical Sessions for oral presentations and 8 Technical Sessions for poster presentations. Inaugural function was followed by Session-I on IAVP-Thematic Lecture, 2017 by Prof. R.N. Sreenivasa Gowda on 'Current issues and challenges in the diagnosis and control of poultry diseases', wherein the speaker highlighted the reasons for frequent disease outbreaks among poultry in spite of rigorous vaccination protocols. Session-II was 'ASVP Session' wherein 5 eminent pathologists from different Asian countries presented the papers on advances in the field of Veterinary Pathology. From India, Prof. R. Somvanshi made an elaborate presentation on 'Veterinary Pathology Education in India: A Brief Overview'. This was followed by Session-III on

\*Presently Vice Chancellor, KVAFSU, Bidar, Karnataka

'Farm Animal Pathology', wherein three lead papers were presented were followed by 15 oral presentations. The importance of calf mortality was stressed in this session and some novel findings with respect to the epidemiology of FMD virus, sheep pox and PPR outbreaks were presented by the speakers. Two poster sessions (P-I & P-II) 'New horizons in disease diagnosis' and 'Wild animal and aquatic animal pathology' were organized as parallel sessions. Sessions on first day were concluded with cultural programme in the auditorium of KVC.

Second day of the Conference started in parallel sessions of 'New horizons in disease diagnosis' (Session-IV) with two lead papers and 10 oral presentations and 'Wildlife and aquatic animal pathology' (Session-V) with two lead paper and 9 oral presentations. New perspectives on Japanese Encephalitis in India, advent of digitalization as a learning module in Veterinary Pathology and challenges during wild animal necropsy were presented by the speakers. Posters presentation on 'Poultry disease diagnosis and intervention strategies' (P-III) and 'Toxico-pathology and laboratory animal pathology' (P-IV) were held in parallel sessions. An exclusive session (Session-VI) on 'IAVP-Memorial Lectures and Dr P. P. Gupta Oration' was conducted. In this session, seven memorial lectures viz. Dr S.J. Seshadri Memorial Lecture on Economically important poultry diseases-Diagnosis and control by Prof. R.N. Sreenivasa Gowda, Prof. P.K.R. Iyer Memorial Lecture on Pathology of mycotic diseases by Dr Lal Krishna, Dr A. Sunderaj Memorial Lecture on Pesticide toxicity assessment in rats by Prof. C. Balachandran, Dr B.C. Nayak Memorial Lecture on Forensic application of postmortem changes in animal carcasses and its effective disposal by Prof. S.K. Panda, Dr Gopal Jee Jha Memorial Lecture on Trace elements: Their role in pathophysiology of cellular to nuclear to genomic events of life by Prof. K.K. Singh, Dr G.K. Baruah Memorial Lecture on Immunopathology of economically important and emerging viral diseases of pigs by Prof. T. Rahman were delivered. This was followed by IAVP-Dr P.P. Gupta Oration, 2017 on topic The changing trends and challenges in Veterinary Pathology by Prof. N. Vijayan. All speakers were presented mementoes and certificates by IAVP.



**Glimpses of Asian Veterinary Pathology Congress, 2017 held at Veterinary College-Hebbal, KVAFSU, Bengaluru**

The afternoon session of second day was started with parallel sessions of 'Poultry disease diagnosis and intervention strategies' (Session-VII) with three lead papers and 15 oral presentations, 'Pet and companion animal pathology' (Session-VIII) had two lead papers and 10 oral presentations. Current aspects with respect to ILT, Avian influenza, CIA in poultry and ante-mortem diagnosis of rabies in dogs were presented by the experts. Posters presentation on 'Farm animal pathology' (P-V) and 'Molecular pathology and oncology' (P-VI) were held simultaneously. Session-IX on 'Young Scientist Award Oral Presentation and Prof. S. Ramachandran Molecular Oncology Session' was held. A total 25 presentations for Young Scientist award and 5 presentations for Prof. S. Ramachandran Molecular Oncology Award were made in this session and the day was concluded with dinner at Country Club.

On the third day (11.11.2017), morning activities were started at with parallel sessions of 'Toxicopathology and laboratory animal pathology' (Session X) and 'Molecular pathology and oncology' (Session-XI), in which five lead papers and 15 oral presentations and two lead papers and 15 oral presentations were made, respectively. Techniques

in neurotoxicology, molecular endpoints in toxico-pathology and molecular mechanisms of equine influenza infection were presented and discussed. Posters presentation on 'Pet and companion animal pathology' (P-VII) and 'Clinical pathology' (P-VIII) were also held simultaneous sessions. Session-XII on 'Clinical pathology' with two lead papers and 10 oral presentations was done. The ICVP Technical Session-XIII 'ICVP Session on Case Presentation' was successfully held with 15 oral presentations. It was followed by General Body meetings of IAVP & ICVP.

The Valedictory Function had Chief Guest, Dr M.T. Manjunath, Director, Department of Animal Husbandry and Veterinary Services, Government of Karnataka and Guest of Honor, Prof. Placid E. D' Souza, Dean, Veterinary College, Bengaluru. The function was presided over by Prof. R. Somvanshi, President IAVP. Results of IAVP Awards, viz. IAVP Fellowships, IAVP-Best MVSc/ PhD Thesis Awards, IAVP-Young Scientist Awards for best oral presentation, IAVP-Prof. S. Ramachandran Memorial best Molecular Oncologist award, IAVP-Best Poster presentation awards and IAVP-Achievement awards in specialty subjects were announced by Dr K.P. Singh, General Secretary of IAVP. These awards were presented by dignitaries to winners. IAVP Fellowships, 2017 were awarded to Dr Nitin Virmani, Hisar; Prof. R.P. Gupta, Hisar and Prof. V. Rama Devi, Gannavaram, AP. (Details may be seen in IAVP website [iavp.org](http://iavp.org)) ASVP Awards for Best Poster Presentations were announced by Dr T.V. Anilkumar, President of ICVP & ASVP. ICVP awards for Best Case Presentations were announced by Dr Amarjit Singh, Secretary of ICVP. IAVP conveyed thanks and presented memento and certificates to Dr H.D. Narayanaswamy and team members for organizing this International Congress in a befitting manner. In the concluding remark, the President / Organizing Secretary thanked the delegates, sponsors, officials and students for extending their cooperation and successful conduct of conference. The three days grand and successful event ended with National anthem.

### IAVP Regional Seminar

## One Day Seminar on Molecular Diagnosis and Pathology of Emerging Diseases of Livestock and Poultry held on 25th February, 2018 at Department of Pathology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam

One day seminar was organized by the IAVP Assam Chapter in collaboration with IAVP on "Molecular diagnosis and pathology of emerging diseases of livestock and poultry" in the Department of Pathology, College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati, Assam on 25th February 2018. Prof. T. Rahman, Head, Department of Veterinary Pathology was Chairman of Organizing Committee. The Seminar was graced by invited experts, faculty and students of Department of Pathology. Experts were Drs B.N. Tripathi, Director, ICAR-NRC Equines, Hisar, R. Somvanshi, President, IAVP, C. Balachandran, Professor and Head, Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, R.K. Nagar, Tripura, S.K. Panda, Prof. & Head, Department of Pathology, OUAT, Bhubaneswar and Zonal Secretary, IAVP (East Zone), T.K. Rajkhawa, Professor & Head, Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Selesih and N.N. Barman, Professor, Veterinary Microbiology, AAU, Guwahati. These speakers gave thought provoking lectures and invaluable guidance to the audience particularly students. Dr Somvanshi appreciated very sincere efforts made by Dr Rahman and team for organizing seminar in meticulous manner. IAVP honoured Dr T. Rahman and Dr A. Chakraborti by presenting Association memento. This was followed by distribution of certificates to the participants. The seminar ended with a vote of thanks given by Dr B. Dutta, Asstt. Professor and Organising Secretary, IAVP Assam Chapter.



Experts on dais-Drs T. Rahman, B.N. Tripathi, R. Somvanshi, S.K. Das and S.K. Panda  
A group photo of experts, faculty & students of IAVP Chapter, AAU, Guwahati, Assam

### ICAR-Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Veterinary Pathology

**Dr Rajeev Ranjan**, Scientist, International Center for Foot and Mouth Disease, Jatni, Odisha was awarded ICAR Jawaharlal Nehru Award for Post Graduate Outstanding Doctoral Thesis Research in Veterinary Pathology, 2017 by Shri Radha Mohan Singh, Union Agriculture and Farmers Welfare Minister on 16th July 2018 at New Delhi. Dr Rajeev Ranjan did his PhD on "Immunopathology and persistence of Foot-and-Mouth Disease virus following natural infection in cattle and buffaloes in India" in Veterinary Pathology under supervision of Dr K.P. Singh, Principal Scientist, Centre for Animal Disease Research and Diagnosis, ICAR- Indian Veterinary Research Institute, Izatnagar, UP. **IAVP congratulates to Dr Rajeev Ranjan and his mentor Dr K.P. Singh for this great achievement. Email: drrajraj@gmail.com**



### PhD Thesis Abstract of ICAR-Jawaharlal Nehru Award Winning Thesis

**Title of Thesis: Immunopathology and persistence of Foot-and-Mouth Disease virus following natural infection in cattle and buffaloes in India by Dr Rajeev Ranjan, 2016.** Guide: Dr K.P. Singh, Deemed University, ICAR-Indian Veterinary Research Institute Izatnagar, Bareilly (UP)

Foot and mouth disease (FMD) is a highly contagious, vesicular and economically devastating viral disease with persistently infected carrier stage. So, there is a need to understand FMD virus ecology in endemic region to provide the basis for effective control strategies. For this, serum, oesophageal-pharyngeal fluid (OPF), milk and tissues samples were collected at regular interval to establish duration and site of FMDV persistence in convalescent (Con) and asymptomatic (Asy) cattle/buffalo following FMDV infection. Anti-nonstructural protein (anti-NSP) Ab positive percent was higher in Con than Asy animals due to replication of FMDV. After subset of FMDV incidence anti-NSP Ab positive percent was reduced from 81-61 % at 14 month post incidence (mpi). The duration of FMDV secretion in milk in infected cows was found up to 37 days post clinical manifestation (dpm). Virus isolation (VI) from OPF varied from 17.13- 1.07% till 13-14 mpi. Virus isolates were clustered within O/ME-SE/Ind2001d lineage. More number of VI was recorded in Con animals than Asy animals. After 4-5 mpi, approximately 80 percent animals were found positive by genome detection while virus was isolated from 17 percent animals only. In species wise, VI was recorded in buffalo till 13-14 mpi while in cattle it was till 7 mpi. Only 3 viruses were rescued from tissues samples collected from aborted foetus/stillbirth/dead calves. Overall, 49/1100 tissues samples were found positive for FMDV genome by nucleic acid recognition (NAR) methods i.e. mPCR and RT-LAMP, among these tissues samples, highest detection of FMDV antigen was recorded in dorsal soft palate (DSP 1) followed by DSP2 and palatine tonsil (PTON) by immunomicroscopy. In species wise, tissues from buffalo were found more positive by NAR methods than cattle. Antigenic variants are generated during the persistent phase of the disease and during a natural outbreak generation of antigenic variants may be more frequent in carrier buffalo than cattle. Detection of FMDV genome in foetal tissue and OPF collected from calves born from FMDV recovered cows suggest vertical transmission of FMDV from dams to foetuses during acute phase of infection at different stages of pregnancy. In this study, FMDV persist in carrier cattle and buffalo till 7 and 13 mpi, respectively and virus isolated from clinical and persistent/subclinical infection are genetically and antigenically different to some extent. DSP and PTON are the sites of persistence following natural infection in cattle and buffaloes.



## Award and Honours

## Honorary Doctorate of Science degree to Dr L.N. Acharjyo

**Dr L.N. Acharjyo**, veteran eminent Veterinary Pathologist was awarded Honorary Doctorate of Science (*Honoris Causa*) degree along with internationally fame agriculture scientist Dr M.S. Swaminathan by Orissa University of Agriculture and Technology, Bhubaneshwar on dated 23-2-2018. On its 37th Convocation. Dr Acharjyo was given this rare honour and recognition by Chancellor Professor Ganeshi Lal in presence of State Agriculture Minister and Dr Trilochan Mohapatra, Director General, ICAR for his significant contributions in wildlife disease management and conservation. Dr L.N. Acharjyo is an eminent Veterinary Pathologist and Fellow of IAVP. **IAVP congratulates to Dr L.N. Acharjyo for this rare honour and recognition.**



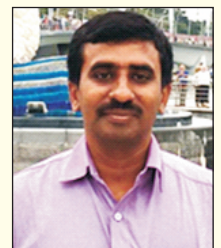
## ACVP to Dr Shankumar Mooyottu

**Dr Shankumar Mooyottu**, DVM, MVSc, MS, PhD, Assistant Professor, College of Veterinary Medicine, Iowa State University, Ames, Iowa, USA has qualified prestigious American College of Veterinary Pathologists (ACVP) examination. Dr Shankumar is alumni of Division of Pathology, IVRI, Izatnagar, UP. **IAVP congratulates to Dr Shankumar Mooyottu for this great achievement.** Email: shaan@iastate.edu.



## Member Editorial Board of Avian Pathology Journal to Dr V. Gowthaman

**Dr V. Gowthaman**, MVSc, PhD, Assistant Professor, Poultry Disease Diagnosis and Surveillance Laboratory, Veterinary College and Research Institute Campus, TANUVAS Namakkal, Tamil Nadu has been selected as an Editor in the world's leading scientific journal in the field of poultry diseases Avian Pathology. Dr V. Gowthaman was graduated from Veterinary College and Research Institute, Namakkal, Tamil Nadu. He did his MVSc (from HSADL, IVRI Bhopal) and PhD from, Avian Diseases Section, Division of Pathology, IVRI, Izatnagar, UP. **IAVP congratulates to Dr V. Gowthaman for this great achievement.** Email: vetgowth@yahoo.co.uk



## SELECTIONS

**Dr R. Somvanshi** (65), Ex Emeritus Scientist (ICAR), Ex. Acting Joint Director, CADRAD, Ex. Head of Division Former National Fellow (ICAR) and Retired Principal Scientist. Division of Pathology, ICAR-Indian Veterinary Research Institute, Izatnagar, 243 122 (UP) was selected as ICAR-Emeritus Professor in Veterinary Pathology. He joined this assignment on dated 14-5-2018 at Division of Pathology, ICAR-Indian Veterinary Research Institute, Izatnagar, 243 122 (UP).



**Dr Rajendra Singh** (62), Principal Scientist and Head, Division of Pathology, ICAR-Indian Veterinary Research Institute, Izatnagar, 243 122 (UP) was selected as ICAR-Emeritus Professor in Veterinary Pathology. He will join this assignment at Division of Pathology, ICAR-Indian Veterinary Research Institute, Izatnagar, 243 122 (UP) after his superannuation on 31-12-2018.



**Dr R.P. Gupta**, (61) Former Head, Department of Veterinary Pathology, College of Veterinary Sciences, LUVAS, Hisar, Haryana has been selected as ICAR-Emeritus Scientist by Division of Education, ICAR, New Delhi



## APPOINTMENTS

### **Dr H.D. Narayanaswamy new Vice Chancellor of Karnataka Veterinary, Animal and Fishery Sciences University (KVAFSU), Bidar, Karnataka**

**Dr H.D. Narayanaswamy**, MVSc and PhD (Veterinary Pathology), eminent Veterinary Pathologist, Dean, Veterinary College, Gagad, Karnataka and former Professor, Department of Veterinary Pathology, Veterinary College, Hebbal, Bengaluru of Karnataka Veterinary, Animal and Fishery Sciences University (KVAFSU), Bidar, Karnataka has joined as new Vice Chancellor of KVAFSU, Bidar on dated 22-2-2018. He had more than two decades experience in Under Graduate and Post Graduate teaching. He has guided about 19 MVSc and 10 PhD students in Veterinary Pathology. He also successfully completed 6 research projects worth of Rs 6.5 crores, funded by various Institutions of State and Central Government that has helped the Department as well as established exclusively ICAR-NICHE area of excellence laboratory in Veterinary College, Hebbal, Bengaluru. His projects and research findings have benefitted, either directly or indirectly to the rural and farming communities, especially the poultry industry in Karnataka. Recently, he has organized very successfully Asian Veterinary Pathology Congress, 2017 on 9-11th November at Bengaluru. **IAVP congratulates Dr H.D. Narayanaswamy for this coveted appointment and wishes him best wishes for all success.**



### **Dr C. Balachandran new Vice Chancellor of Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), Chennai, Tamil Nadu**

**Dr C. Balachandran**, MVSc and Ph.D. (Veterinary Pathology), PG Diploma (Agricultural Journalism), PG Diploma (Ethnoveterinary Practices), an eminent Veterinary Pathologist has joined as new Vice Chancellor of Tamil Nadu Veterinary and Animal Sciences University, Chennai, Tamil Nadu on 2nd April 2018. Earlier he served as Registrar of the TANUVAS between 2010 and 2013 and Dean of the Madras Veterinary College between 2015 and 2017. Dr Balachandran has 21 years' experience as Professor of Veterinary Pathology and has specialised in Avian Mycotoxicoses/ Pathology, Clinical Pathology, Cancer Biology-Clinical and Experimental Pathology. Dr Balachandran was instrumental in obtaining accreditation from the Indian Council of Agricultural Research for the Madras Veterinary College. He has authored six books and guided nine Ph.D., research scholars. He is very active leader of IAVP and ICVP and served in these organizations on many positions. **IAVP congratulates Dr C. Balachandran for this coveted appointment and wishes him best wishes for all success.**



## PROMOTION

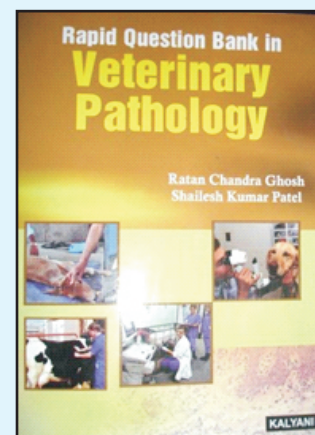
**Dr A.W. Lakkawar**, Associate Professor, Department of Veterinary Pathology, Rajeev Gandhi Institute of Veterinary Education and Research, Kurumbapet, Puducherry has been promoted as Professor on 06.03.2018 under CAS Scheme.



## BOOKS PUBLISHED

**RAPID QUESTION BANK IN VETERINARY PATHOLOGY** by Drs R.C. Ghosh and S.K. Patel, College of Veterinary Science & Animal Husbandry, Chhattisgarh Kamdhenu Vishwavidyalaya, Anjora, Durg, C.G., Kalyani Publishers, New Delhi. Paper Back, Pages 139, Price Rs. 135/-, 2015

The 'Rapid Question Bank in Veterinary Pathology' is a long time demand of Under Graduate and Post Graduate students of Veterinary Science. The question bank has been prepared on the basis of new academic regulation of MSVE 2016 of Veterinary Council of India, New Delhi. A total of about 2000 Multiple Choice Questions (MCQ) have been given. Students of BVSc& AH, MVSc and PhD (Veterinary Pathology) programmes would find this question bank very useful for better performance in the examinations. In addition to this, the question bank would be of great help for students who are appearing in Junior Research Fellowship (JRF), Senior Research Fellowship (SRF), National Eligibility Test (NET), Agriculture Research Service Examination (ARS), Union Public Service Commission (UPSC) and Public Service Commission (PSC) examination of different states etc. Authors are sure that this 'Rapid Question Bank in Veterinary Pathology' would be able to fulfill the demand of multiple discipline students.



**Textbook of Illustrated Veterinary Pathology** by Prof. R.S. Chauhan, Year 2018, Pages 876. Soft Cover, Brillion Publishing, Price Rs 2995/=. Content are as per the updated VCI Syllabus. For e-version of the book or sample chapter for personal perusal one may contact: [info@brillionpublishing.com](mailto:info@brillionpublishing.com) [www.brillionpublishing.com](http://www.brillionpublishing.com)



## SUPERANNUATION'S

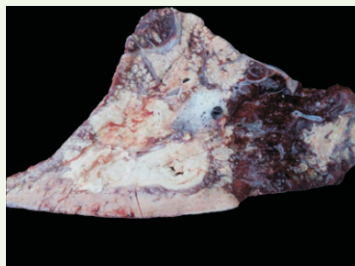
**Dr Taibur Rahman** (65), Professor and Head, Department of Pathology, Assam Agricultural University, Khanapara, Guwahati, Assam superannuated from AAU services on 31-08-2018. He served in AAU more than three decades. IAVP wishes healthy and peaceful post retirement life to Dr T. Rahman



**Dr N. Divakaran Nair**, M.V.Sc, PhD. Professor, Department of Veterinary Pathology, College of Veterinary & Animal Sciences, Kerala Veterinary and Animal Sciences University, Mannuthy, Kerala superannuated from KVASU services on 27-11-2017. He served more than three decades and had special interest in Neuropathology and Toxicopathology. IAVP wishes healthy and peaceful post retirement life to Dr N. Divakaran Nair



## Gross Lesions



Multifocal to coalescing granulomatous pneumonia (Pneumonic tuberculosis), Camel



Multifocal to coalescing granulomatous lymphadenitis, Camel

**Contributer: Dr Samir Raval**, Assistant Professor, Department of Veterinary Pathology, College of Veterinary Science and Animal Husbandry, Sardarkrushinagar Agricultural University, Sardarkrushinagar Dist. Banaskantha, Gujarat

Obituary  
**Professor D. S. Kalra**

(22-12-1922-18-4-2018)

**Dr Dharam Sarup Kalra** (96) was born on 22nd December 1922 in Mianwali District (now in Pakistan). After early education he joined Lahore Veterinary College and obtained BVSc degree in 1946. After graduation he was appointed as Demonstrator of Pathology, Bacteriology and Parasitology at Veterinary College, Lahore. After partition, Dr Kalra was appointed in the same capacity at Veterinary College, Hisar in 1948. On his work as Research Assistant under Mastitis Research Scheme, he was awarded MVSc degree in Pathology & Bacteriology by Panjab University, Solan. In August 1957, he was appointed as ADIO and later on in May 1960, as Assistant Professor of Pathology and Bacteriology. In September 1963, he was deputed to Ohio State University, Columbus, USA and was awarded PhD degree in March 1966. Prof. Kalra's academic record has been excellent, securing first division marks in all the University examinations. In PhD program, he was conferred the membership of the Society of Phi-Zeta, an Honor Society of Veterinary Medicine in USA. In 1966, he was appointed as Associate cum Head of Department of Public Health. In April 1968 he became Professor of Pathology and in 1972, elevated to Senior Professor. In 1979 he was appointed Dean, Veterinary College, Hisar. In 1980, he was deputed to Iraq as a Visiting Professor in the University of Baghdad and served there up to 1983. There besides teaching he guided three MVSc students.



Prof. Kalra was actively engaged in teaching and research for a long period of 49 years. He guided 24 students (12 PhD and 12 MVSc) and one for postdoctoral (PDF) research in Veterinary Public Health. He was responsible for initiating the proposal for the establishment of Disease Investigation Laboratories in Haryana State, which proved boon to field veterinarians as well as farmers. His main research contributions were in the field of mastitis, mycotoxicosis, horn cancer, pneumonia and brucellosis. He authored two books and published more than 120 research papers in Indian and foreign journals. He has also credit of investigating a disease of unknown etiology (*degnala* disease), affecting cattle and buffaloes in the rice growing areas. On superannuation in December 1984, he was offered the post of Professor & Head at Department of Veterinary Pathology in University of Maiduguri, Nigeria. He worked here up to 1995 and developed teaching and research facilities, initiated post graduate program in Veterinary Pathology and guided three students for PhD degree. He left heavenly abode on 18th April, 2018 at Hisar. Prof. Kalra is survived by two sons and a number of grandchildren. **Demise of veteran pathologist Dr Kalra is a great loss to Pathology fraternity and IAVP.**

### Executive Committee of IAVP

#### PRESIDENT

Dr R. Somvanshi, Izatnagar

#### VICE-PRESIDENTS

Dr N.K. Sood, Ludhiana

Dr R.C. Ghosh, Durg

#### SECRETARY GENERAL

Dr K.P. Singh, Izatnagar

#### JOINT SECRETARY

Dr (Mrs) M. Sahoo, Izatnagar

#### TREASURER

Dr Rajendra Singh, Izatnagar

#### EDITORS, IJVP

Chief Editor

Dr R.V.S. Pawaiya, Mathura

Managing Editor

Dr Vidya Singh, Izatnagar

Editor

Dr A Anand Kumar, Tirupati

#### WEB MANAGER

Dr N.V. Kurkure, Nagpur

#### ZONAL SECRETARIES

West Dr D.V. Joshi, SK Nagar

South Dr V. Rama Devi, Gannavaram

North Dr R.P. Gupta, Hisar

East Dr S.K. Panda, Bhubaneswar

North East Dr D.Singh, Selesih

Central Dr K. Rajukumar, Bhopal

#### EXECUTIVE MEMBERS

Dr C. Balachandran, Chennai

Dr B.N. Tripathi, Hisar

Dr Arvind D. Ingle, Mumbai

Dr N.C. Patra, Kolkata

Dr B.S. Sandhu, Ludhiana

Dr P. Krishnamoorthy, Bengaluru

### EXECUTIVE COMMITTEE, ICVP

#### PRESIDENT

Dr T.V. Anilkumar, Trivandrum

#### VICE PRESIDENT

Dr A.K. Sharma, Izatnagar

#### SECRETARY

Dr Amarjit Singh, Ludhiana

#### TREASURER

Dr K.P. Singh, Izatnagar

#### REGISTRAR

Dr Rajendra Singh, Izatnagar

#### EDITOR

Dr A. Anand Kumar, Tirupati

#### COUNCILLORS

Dr N.K. Sood, Ludhiana

Dr R.C. Ghosh, Durg

Dr Syed S.Y.H. Qadri, Hyderabad