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# NAVS NEWSLETTER

(Quarterly)

FOR PRIVATE CIRCULATION ONLY  
NEW DELHI



**Editor:** Prof. Dr. R.N. Kohli

**NATIONAL ACADEMY OF VETERINARY SCIENCES (INDIA)**

Office: G-4, A Block, NASC, Dev Prakash Shastri Marg, New Delhi-110 012

**NATIONAL ACADEMY OF VETERINARY SCIENCES (INDIA)**

*(Registered with the Registrar of Societies vide Regn. certificate No.S-2/4471 of 1993 dated 7<sup>th</sup> July 1993)*

**NEW DELHI NAVS NEWSLETTER OCTOBER, 2017**

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## **CH. 1: NAVS GENERAL INFORMATION**

### **OUR MISSION**

“To consolidate and promote the views of scientific community on all policy matters related to Veterinary Science and Animal Husbandry in the welfare of India; to encourage better training and utilization of veterinary talent and enterprise in the country; to strive for advancement of livestock sector in the national economy; to promote animal welfare; to protect environment; and to safeguard the interests of the profession and to gain greater recognition and acclaim for it”.

### **GOVERNING COUNCIL 2017-19**

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**Vice-President:** Dr. DVR Prakash Rao, Chennai: [contect@prakashfeeds.com](mailto:contect@prakashfeeds.com)  
**Secretary General:** Dr. S.K. Gupta, [skguptadr@gmail.com](mailto:skguptadr@gmail.com)  
**Treasurer:** Dr. Nem Singh: [singhnem1945@gmail.com](mailto:singhnem1945@gmail.com)  
**Editor:** Dr. R. N. Kohli: [rnkohli@gmail.com](mailto:rnkohli@gmail.com)

#### **Members**

##### **ELECTED**

Dr. B.N. Tripathi, Hisar: [bntripathi1@yahoo.co.in](mailto:bntripathi1@yahoo.co.in)  
Dr. Sanjeev Kumar, Izatnagar: [skgcari@yahoo.co.uk](mailto:skgcari@yahoo.co.uk)  
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Dr. S.K. Srivastava, Izatnagar  
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Dr. S.K. Saha, Izatnagar: [subodhksaha@yahoo.com](mailto:subodhksaha@yahoo.com)  
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Dr. S. K. Tiwari, Durg: [drtiwarisurgery@gmail.com](mailto:drtiwarisurgery@gmail.com)

#### **Members**

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Incumbents holding following Official GOVT. OF INDIA POSITIONS are Ex-Officio members: DG RVS; DDG (A.S.), ICAR; AHC (GOI); and President VCI

## **PATRONS, HONORARY FELLOWS**

### **PATRON**

**Dr. R.P.S. Tyagi (2004)**

### **HONORARY FELLOWS**

**Shri. Sirajudin Qureshi (2006); \*Dr. N.R. Bhasin (2011); \* Dr. J.P. Kukreti (2012);  
Shri Sushil Kumar Agrawal (2012); Dr. Sanjeev Kumar Balyan (2014)**

## **INSTITUTIONAL/CORPORATE LIFE MEMBERS**

### **INSTITUTIONAL LIFE MEMBERS**

**LUVAS (Lala Lajpat Rai University of Veterinary & Animal Sciences), Hisar,  
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**CKVU (Chattisgarh Kamdhenu Veterinary University), Raipur / Durg,  
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**MAFSU (Maharashtra Animal & Fisheries Sciences University), Nagpur,  
Maharashtra**

**RAJUVAS (Rajasthan University of Veterinary & Animal Sciences), Bikaner,  
Rajasthan**

**DUVASU (Deen Dayal Upadhadhaya Veterinary and Animal Sciences University,  
Mathura, U.P.**

**KCVAS (Khalsa College of Veterinary & Animal Sciences), Amritsar, Punjab**

### **CORPORATE LIFE MEMBER**

**M/S Indian Herbs, Saharanpur**

## **PAST OFFICE BEARERS OF THE ACADEMY**

### **Presidents:**

**\* Dr. C.M. Singh - 1993 - 2004 (Founder President)**

**Dr. S.K. Ranjhan - 2004-2007**

**Dr. S.C. Adlakha - 1/7/2007 - 28-2-2008**

**Dr. R.R. Shukla - 28/2/2008 - 31/10/2010**

**Dr. M.P. Yadav - 31/10/2010 - 31/12/2013**

**Dr. K.M.L. Pathak 1/1/2014 - 22/4/2017**

### **Vice-Presidents:**

**Dr. R.P.S. Tyagi -1993 - 2004**

**Col. (Dr.) V.K. Bhatnagar- 2004-2007**

**Dr. R.R. Shukla - 1/7/2007 - 28-2-2008**

**Dr. P.N. Khanna - 28-2-2008 - 31/10/ 2010**

**Col. (Dr.) V.K. Bhatnagar- 31/10/2010 - 31/12/2013**

**Maj. Gen. (Dr.) Shri Kant Sharma 1/1/2014 - 22/4/2017**

**Secretary Generals:**

Dr. P.N. Bhatt -1993 - 2004  
\*Dr. K.L. Sahani -2004-2007  
\*Dr. B.S. Nanda - 1/7/2007 - 23-5-2008  
Dr. N.N. Pathak - 23-5-2008 - 6/7/2009  
Dr. R.N. Kohli - 6/7/2009 - 31/10/2010  
Dr. Gaya Prasad - 31/10/2010 - 31/12/2013  
Dr. Rishendra Verma - 1/1/2014 - 22/4/2017

**Treasurers:**

Dr. A. Ahmad and Dr. B.S. Malik } -1993 - 2004  
Dr. P.N. Khanna - 2004-2007  
Dr. Lal Krishna - 2007 to - 22/4/2017

**Editors:**

Dr. R.N. Kohli - 6/7/2009 to - Date (Founder Editor)

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\* Since deceased

**CHRONOLGY OF NAVS CONVOCATIONS-CUM-CONVENTIONS**

1. First NAVS Convocation: 18<sup>th</sup> December 1996 at Vigyan Bhawan, New Delhi
2. Second NAVS Convocation: 30<sup>th</sup> January 2000 at Pragati Maidan, New Delhi
3. Third NAVS Convocation: 16<sup>th</sup> April 2002 at IVRI, Izatnagar, U.P.
4. Fourth NAVS Convocation: 7<sup>th</sup> May 2005 at GBPUAT, Pantnagar, Uttrakhand
5. Fifth NAVS Convocation: 5<sup>th</sup> May 2006 at JNKVV, Jabalpur, M.P.
6. Sixth NAVS Convocation: 28<sup>th</sup> June 2007 at KVAFSU, Bangalore, Karnataka
7. Seventh NAVS Convocation: 16 May 2008 at SKUAST, Jammu, J & K
8. Eighth NAVS Convocation: 23<sup>rd</sup> January 2009 at SVVU, Tirupati, Andhra Pradesh
9. Ninth NAVS Convocation: 30<sup>th</sup> October 2010 at NDRI, Karnal, Haryana.
10. Tenth NAVS Convocation: 12<sup>th</sup> November 2011 at RAJUVAS, Bikaner, Rajasthan.
11. Eleventh NAVS Convocation: 2<sup>nd</sup> November 2012 at DUVASU, Mathura, U.P.
12. Twelfth NAVS Convocation: 28<sup>th</sup> January 2014 at LUVAS, Hisar, Haryana
13. Thirteenth NAVS Convocation: 28<sup>th</sup> February 2015 at CGKV, Durg, Chhatisgarh
14. Fourteenth NAVS Convocation: 4<sup>th</sup> November, 2015 at IVRI, Izatnagar, U.P.
15. Fifteenth NAVS Convocation held on 22 October, 2016 at KCVAS, Amritsar, Punjab
16. Sixteenth NAVS Convocation to be held on 4-5 November 2017 at Tirupati, A.P.

## **CH. 2: NAVS NEWS**

### **Governing Council Holds its Meeting at Hisar**

A Governing Council Meeting of National Academy of Veterinary Sciences (India) was held on 05.08.2017 at 2.00 P.M. in the Committee Room of Dean, College of Veterinary Sciences, Lala Lajpat Rai University of Veterinary and Animal Sciences, Hisar. It was attended by 13 G.C. members. A couple of important decisions taken at the meeting:

Venue and theme of the next convocation-cum-scientific convention of NAVS (India):

It was decided to organize the 16<sup>th</sup> Convocation-cum-Scientific convention of NAVS (I) at Sri Venkateswara Veterinary University, Tirupati. The theme selected for the scientific convention is: 'Advancement in Veterinary Sciences: Impact on Enhancing Farmers Income'. The dates finalized for the event in consultation with the Vice-Chancellor of SVVU, Tirupati, are: 4<sup>th</sup> and 5<sup>th</sup> of November, 2017. The Organizing Secretary of the event, Dr. T.S. Chandrasekhara Rao, Dean, Faculty of Veterinary Science, Sri Venkateswara Veterinary University, Tirupati - 517 502, has already released a brochure-cum-invitation letter for the event. He can be contacted for further details at Cell: 09989051543, 9440076619; Ph: 0877-2249787 Fax: 0877- 2249786 and email ID:(<dvsc\_svvutpt@yahoo.co.in>

Induction of M/s Ayurvet Ltd as a corporate member and to accept its nominee for the honorary fellowship:

The request of M/s Ayurvet Ltd was unanimously approved and the GC decided to admit M/S Ayurvet Limited as Corporate Life Member of the National Academy of Veterinary Sciences (India). Further, as a goodwill gesture, Dr. Anup Kalra, one of the eminent veterinarian working with M/s Ayurvet Ltd, will be admitted as Honorary Fellow of the Academy during the forthcoming Convocation-cum- Scientific Convention of NAVS (I) to be organized on 4<sup>th</sup> and 5<sup>th</sup> of November, 2017 by Sri Venkateswara Veterinary University, Tirupati.

### **STOP PRESS**

### **NAVS Delhi Office**

The Secretary General NAVS (I) writes: All the Fellows/Members of NAVS (I), Faculty Members/Scientists, etc of Veterinary Institutions are hereby informed that Mr. Sumit Kumar Sharma, contact number 8588808074 has been appointed as Caretaker of the Delhi office of NAVS (I). The office will remain open from 9.00 A.M. to 1.00 P.M. from Monday to Thursday. If anybody wants to visit the NAVS (I) office, he/she is most welcome to do so.

### 3. EDITOR'S NOTE



## The world is running out of antibiotics

A report, *Antibacterial agents in clinical development – an analysis of the antibacterial clinical development pipeline, including tuberculosis*, launched on 20 September 2017 by World Health Organization (WHO) shows a serious lack of new antibiotics under development to combat the growing threat of antimicrobial resistance. Most of the drugs currently in the clinical pipeline are modifications of existing classes of antibiotics and are only short-term solutions. The report found very few potential treatment options for those antibiotic-resistant infections identified by WHO as posing the greatest threat to health, including drug-resistant tuberculosis which kills around 250 000 people each year.

"Antimicrobial resistance is a global health emergency that will seriously jeopardize progress in modern medicine," says Dr Tedros Adhanom Ghebreyesus, Director-General of WHO. "There is an urgent need for more investment in research and development for antibiotic-resistant infections including TB, otherwise we will be forced back to a time when people feared common infections and risked their lives from minor surgery." In addition to multidrug-resistant tuberculosis, WHO has identified 12 classes of priority pathogens – some of them causing common infections such as pneumonia or urinary tract infections – that are increasingly resistant to existing antibiotics and urgently in need of new treatments. The report identifies 51 new antibiotics and biologicals in clinical development to treat priority antibiotic-resistant pathogens, as well as tuberculosis and the sometimes deadly diarrhoeal infection *Clostridium difficile*. Among all these candidate medicines, however, only 8 are classed by WHO as innovative treatments that will add value to the current antibiotic treatment arsenal.

There is a serious lack of treatment options for multidrug- and extensively drug-resistant *M. tuberculosis* and gram-negative pathogens, including *Acinetobacter* and *Enterobacteriaceae* (such as *Klebsiella* and *E.coli*) which can cause severe and often deadly infections that pose a particular threat in hospitals and nursing homes. There are also very few oral antibiotics in the pipeline, yet these are essential formulations for treating infections outside hospitals or in resource-limited settings. "Pharmaceutical companies and researchers must urgently focus on new antibiotics against certain types of extremely serious infections that can kill patients in a matter of days because we have no line of defence," says Dr Suzanne Hill, Director of the Department of Essential Medicines at WHO.

To counter this threat, WHO and the Drugs for Neglected Diseases Initiative (DNDi) set up the Global Antibiotic Research and Development Partnership (known as GARDP). On 4 September 2017, Germany, Luxembourg, the Netherlands, South Africa, Switzerland and the United

Kingdom of Great Britain and Northern Ireland and the Wellcome Trust pledged more than €56 million for this work.

"Research for tuberculosis is seriously underfunded, with only two new antibiotics for treatment of drug-resistant tuberculosis having reached the market in over 70 years," says Dr Mario Raviglione, Director of the WHO Global Tuberculosis Programme. "If we are to end tuberculosis, more than US\$ 800 million per year is urgently needed to fund research for new antituberculosis medicines".

New treatments alone, however, will not be sufficient to combat the threat of antimicrobial resistance. WHO works with countries and partners to improve infection prevention and control and to foster appropriate use of existing and future antibiotics. WHO is also developing guidance for the responsible use of antibiotics in the human, animal and agricultural sectors.

Prof. Dr. R.N. Kohli,  
Honorary Editor, NAVS (India)  
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Old friends are  
gold..  
New friends are  
diamonds..  
If you get diamonds,  
don't forget gold  
because only gold  
can hold a diamond.



#### **4. LETTERS TO THE EDITOR**

Dear Dr Kohli: Thank you for the July 2017 Newsletter. I congratulate you for agreeing to continue your stewardship as Editor respecting the GC and members of the academy. It is also a good decision to have nominated Dr. Kapoor to be associated with you so that there will be a gradual transition when you decide to lay down office and I do not expect it to be soon.

I also congratulate the newly elected GC and wish them all success in promoting the set goals. Two important issues have been addressed in this Newsletter. The President has spoken wisely about the one health concept.

Infectious agents have neither any border restrictions nor any species barriers. We keep recognizing new global areas and new hosts of hitherto known and unknown agents of disease. The deteriorating eco-friendly system has aggravated the situation. Whenever a new disease is encountered panic ensues and attempts are made to contain the problem. These are only palliative unless in-depth studies are initiated and a combined effort of public health and animal health authorities go into it to find lasting solutions. Microbial resistance to antibiotics, an almost man-made situation is an example.

The other issue is brought up by Prof Ram Kumar, former Secretary of VCI. While the important economic role played by the livestock in the rural economy is recognized, the research input is not in commensurate with the need until it is under an independent body to manage it. The proposal for a separate ICVR has been mooted long ago and has gone through several levels of clearance it is still to be approved by the Government. The Veterinary Profession had to fight for long to form Veterinary Universities. Now that they are established in almost all states, it is time that ICVR is formed soon to bolster the research activities. I hope this will be pursued by the New GC of NAVS. Regards:

Dr. B.S. Keshava Murthy; <[bskmurthy@hotmail.com](mailto:bskmurthy@hotmail.com)>

July 2017 issue is a beautiful compilation of the veterinary events. Best congratulations. Prof. Dr. Amreek Singh, 39, Westwood Crescent, Charlottetown PE CIA 8X4, Canada; Telephone Residence: +011-902-892-0048; Email ID: [singh@upei.ca](mailto:singh@upei.ca)

Kohli Sir: I am happy to know that you will continue to be the Editor. Thanks a lot. I am sure NAVS will be benefited by your contributions and be indebted to you. Brig. Dr. Narendra Singhvi: Email ID: <[singhvinm@gmail.com](mailto:singhvinm@gmail.com)>

Respected Dr Kohli: I thank you very much for forwarding to me the July 2017 issue of the NAVS Newsletter. At the outset, I congratulate all the new office bearers for their new assignments and bestow my confidence in them to steer the NAVS to a new height. The Newsletter has come up very well - as usual - with delightful contents. The Editorial Note and 20 new discoveries by India/Indians are praiseworthy and many of us did not know even our own things. We feel proud of Professionals like you and for your commitment, hard

work, and passion about the profession. May The Almighty bless our profession with more professionals with these qualities. May God bestow upon you with good health for the benefit of the Society and the Profession.

Dr. R.K. Singh, Director/Vice Chancellor, Indian Veterinary Research Institute, (Deemed University), Izatnagar-243 122, India; Phone: +91-581-2300096; Fax-no. +91-581-2303284; Email: [directorivri@gmail.com](mailto:directorivri@gmail.com); [rks\\_virology@rediffmail.com](mailto:rks_virology@rediffmail.com).

Dear Prof. Dr. Kohli: As usual the July 2017 NAVS Newsletter is well in time with all important news, information, updates of professional interests along with the tasks before the new Governing Council. Many thanks for kindly agreeing to continue as the Honorary Editor of NAVS (India). Through NAVS Newsletter, I once again convey hearty congratulations to the newly elected Office Bearers and Members of the G.C. Hopefully the Team will be able to accomplish the professional agenda before it. Regards and best wishes:

Prof. (Dr.) M. P. Yadav, Editor, Agricultural Research; President, IAVMI; Email ID: [yadav\\_mp@hotmail.com](mailto:yadav_mp@hotmail.com)

Dear Dr Kohli: Many thanks for putting in your efforts in producing the high quality of NAVS Newsletter (July 2017 issue) for the veterinarians of India and abroad. Hope you will continue in future in this task of enriching veterinarians. Regards: Dr. Shree Narayan Singh [snsingh.2006@gmail.com](mailto:snsingh.2006@gmail.com)

Thanks for another superb issue of NAVS Newsletter dished out by your goodself. Dr. D. B. Patil, Director of Research & Dean, Post Graduate Studies, Kamdhenu University, Karmayogi Bhavan, 4th Floor, Sector 10A, Gandhinagar 382010 & Executive Secretary, Indian Society for Veterinary Surgery (ISVS); Email: [db1608@gmail.com](mailto:db1608@gmail.com); Tel: 079-65722001; (M) - +91-7573035104

Dear Dr Kohli: It was great to see July issue specially with you as Editor. I think you are the best to work as Editor and I pray good sense prevails upon the Governing Council to trust this job to you till you desire to do so. In my opinion this is very telling times to our profession where it has to advance many suggestions to keep up its supremacy. Dr. Mahesh Chandra Agrawal; Former: Emeritus Scientist, ICAR and Dean Veterinary College, Jabalpur; [drmcagrawal@gmail.com](mailto:drmcagrawal@gmail.com)

Dear Sir: While going through the July, 2017 issue of Newsletter, I became very happy to learn that you have acceded to the request of new GC to carry out the responsibility of Editor. Sir, you have been doing commendable job to promote the veterinary profession by timely publication of NAVS(I) Newsletter which is said to be the mouth piece of this organization. I pray to Almighty for your long life and sound health, so that NAVS (I) may always be benefited by your excellent editorial capacity. Regards: Dr. K. P. Mallick, Retired Principal Scientist (IVRI); [dr.kpmaallick@gmail.com](mailto:dr.kpmaallick@gmail.com)

Dear Dr Kohli: Congratulations and felicitation for continuing to donate your time for the sake of NAVS and the Newsletter. Thanks for the latest issue of NAVS Newsletter. I am very impressed by the story that you shared on the lamb, named Duck. The owner oozed her compassion by comparing the lamb, without front legs, to her son and she soon took action to save the lamb's life. Good example of Animal Welfare Practices in real life. Thanks and kind regards  
Dr. R.S. Khanna; <[dr.rskrsk@gmail.com](mailto:dr.rskrsk@gmail.com)>

Dear Dr. Kohli: Received recent Newsletter and as always it is a great source of information, which we deeply appreciate. Thank you for agreeing to continue to be the Chief Editor of the Newsletter. Warm regards, Dr. A K Karihaloo, USA.  
<[karihaloo@gmail.com](mailto:karihaloo@gmail.com)>

Dear Prof. Kohli, I have carefully gone through the contents of the July issue of NAVS Newsletter which are very useful and informative. I am immensely pleased to know that you very kindly agreed to work as the Editor of NAVS Publications. Many friends requested you for that. Thanks and regards.  
Dr. G. S. Rajorhia, Vice President, Indian Dairy Association.  
<[gsrajorhia@rediffmail.com](mailto:gsrajorhia@rediffmail.com)>

Thank you, Respected Sir, for the July 2017 issue of NAVS Newsletter. I am astonished at the great effort that is put in by you to bring this valuable information within a cover for all of us. Best Regards: Dr. Indranil Samanta, Associate Editor (Bacteriology)-BMC Veterinary Research; Senior Assistant Professor, Department of Veterinary Microbiology, West Bengal University of Animal and Fishery Sciences, 37, K.B. Sarani, Kolkata- 700037 West Bengal, India. +91-9062918679. <[isamanta76@gmail.com](mailto:isamanta76@gmail.com)>

Sir, I received the July issue of NAVS Newsletter. First of all I personally thank you for accepting the request of new executive body to continue to take care of the journal. It is really very difficult to maintain such punctuality in release of the journal after collecting the valuable material and compiling it. It needs highest level of devotion. I have gone through the contents and got enriched. I felt very happy to see that new executive has expressed its concern for more recognition of our academy. In my opinion recognition comes through contribution and not by seeking. Livestock is going to face challenges like all other living ones with environmental adversities. We need to draw short term, mid term and long term policies to overcome these challenges. Focus on the policy issues is one of the most important contributions which academy can make. We need to make efforts in this direction without further delay.  
Dr. Khub Singh: Email: <[ksingh.chairman.jrdrf@gmail.com](mailto:ksingh.chairman.jrdrf@gmail.com)>

## **5: FROM THE PRESIDENT'S DESK**

### **Doubling Farmers' Income**



While addressing the audience at the inauguration ceremony of the Sardar Sarovar Dam Project on Sunday, 17<sup>th</sup> September 2017, the Union Minister for Road Transport & Highways, Shipping and Water Resources, Shri Nitin Gadkari stated that the Project would fulfil Prime Minister Narendra Modi's vision of doubling farmers' income by 2022.

The Hon'ble Prime Minister had shared his vision of doubling farmers' income at a Kisan rally. The vision is aimed at revitalizing the agriculture sector. However, to double the farmers' income, an annual growth rate of more than 10.4% in farmer's income would be required. This is evident from the national report which suggests that the Agricultural GDP to the total GDP ratio is continuously decreasing while its allied sector, which includes dairy and fishery sector, shows an upright trend for last few years. The 12th Five-Year plan (2012-17) had targeted 4.1% growth rate, however, the rate of growth of Agri GDP has been around 2%. The growth in farm income after 2011-12 has also plunged. As per the available reports, livestock sector is contributing significantly towards the farm income at a growth rate of 16.32 %.

Various experts have expressed their apprehension as to whether it is indeed possible to double incomes by 2022-23. This is primarily because agricultural growth in the post-reform period, barring a few exceptional years, has been stagnant and has historically failed to meet the target set by the government. As per the Agriculture Census 2010-11, 67.10% of India's total farmers are marginal farmers (below 1 h.a.) followed by small farmers (1-2 h.a.) at 17.91%. However, the productivity of the marginal farmers is limited by the size of landholdings. Livestock sector can enhance the income level of such farmers; it can bring about social transformation women empowerment, employment and regular income in rural India. Hon'ble PM has laid down a seven-point strategy to achieve this target. There is a focus on irrigation; provision of quality seeds and nutrients; large investments in warehousing and cold chains to prevent post-harvest crop losses; promotion of value addition through food processing; creation of a national farm market, removing distortions and e-platform across 585 stations; introduction of a new crop insurance scheme; and, promotion of ancillary activities like poultry, beekeeping and fisheries.

The livestock sector globally is highly dynamic. It is pertinent that Animal Husbandry sector which is contributing more than 33 per cent of total agricultural GDP, be included in this exercise. This figure may be higher in states like Punjab and Haryana and is increasing. Since India is world's sixth

largest economy by GDP (Nominal) and world's fastest-growing large economy, it is expected that with rise in population, income growth and urbanization, the demand for animal products will rise. Therefore, we need to focus on developments in animal breeding, nutrition and health care that will contribute to increasing potential production and further efficiency and genetic gains.

Doubling agricultural income by 2022 is a mammoth task. It is also one that is the need of the hour. Increasing farmer suicide rates and increasingly erratic weather patterns further add to the problem. Here, the role of Animal Husbandry is crucial. The livestock sector globally is highly dynamic. Total meat production in the developing world tripled between 1980 and 2002, from 45 to 134 million tons (World Bank 2009). Livestock products contribute 17 per cent to kilocalorie consumption and 33 per cent to protein consumption globally. The focus of the government on this sector is much needed. We now need to ensure that the implementation by all stakeholders is uniform, effective and done on war footing.

'End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture' is the second goal among the 17 Sustainable Development Goals (SDGs) finalised by the UN to be achieved by 2030. Our Veterinary profession can play a vital role in achieving this goal since animal products like milk, eggs, fish and meat are a significant source of quality nutrition. India's livestock sector is growing at a fast pace and can emerge as a major contributor in doubling the farmers' income. It is predicted that by 2020 livestock would be the most important sector in terms of value-added commodity.

The promotion of dairy, poultry, piggery, small ruminants and fisheries can be envisaged as one of the major strategic pathway towards doubling farmer's income. It is worth mentioning that in comparison to the years 2011-14, the growth in milk production during the years 2014-17 has been 16.9 per cent. Further, investment in dairy sector can create attractive employment opportunities for youth. If marginal farmers are encouraged to avail soft loans to maintain small dairies, this will generate employment, and supplement their income in addition to providing nutrition to their children. I have visited many farmers in Haryana who have been doing exceedingly well in dairy sector.

Fish farming is a vibrant sector with varied resources and high potential. Transformation of the fisheries sector from traditional to commercial scale has led to an increase in fish production from 3.84 MMT in 1990-91 to 10.79 MMT during 2015-16, while the export earnings from the sector registered at Rs. 30,420.83 crore in 2015-16 (US\$ 4.69 billion).

A visit to APEDA web site would reveal that there is decline in earning from export of poultry products, dairy products, processed meat and buffalo meat. However, there is a rise in export of sheep/goat meat. All stake holders need to put in extra efforts to facilitate upward swing in export of these products.

Towards Hon'ble Prime Minister vision, the NAVS (I), Convocation-cum-convention has been planned at Tripuri on 04 and 05th November 2017 to deliberate on the issue. The theme of the seminar is, 'Advancement in

Veterinary Sciences: Impact on Enhancing Farmers' Income'. Veterinary fraternity throughout India and abroad in general and NAVS Fellows in particular are requested to participate in deliberations so that we pool our thoughts and ideas to fulfil the above vision. The Veterinary fraternity is suggested to visit web site of NAVS (I) for further information and they may also contact Dr. T. S. Chandrasekhar Rao, Dean, Faculty of Veterinary Science (Mob No. 09989051543), Triputi for details of the seminar.

Maj. Gen. Dr. Shri Kant Sharma,  
[shrikant28@hotmail.com](mailto:shrikant28@hotmail.com)

## **6: VET TRACKS**

### **6-A. OBITUARY**

#### **6-A.1: Lt. Gen. Dr. N.S. Kanwar is no more**

We are sorry to announce the sad and untimely demise of Lieutenant General Dr. N.S. Kanwar. a distinguished Fellow of the Academy and the former Director General of Remount Veterinary Services. He left for his heavenly abode on 15 Sep 2017 at Panchkula (Haryana) and is survived by wife Mrs Kamla and three sons.

Lt. Gen. Kanwar was a 1970 batch alumnus of College of Veterinary Science, Punjab Agricultural University, Ludhiana (now in GADVASU) and did his Masters' in Veterinary Pathology from IVRI, Izatnagar. He also did his 'National Diploma in Equine Husbandry Medicine & Surgery' (NDEHMS) from the same institute.

Lt. Gen. Kanwar was commissioned in the Indian Army in 1977 and during his long distinguished service in the Army he qualified in Senior Defense Mgt Course (SDMC-66) and Adv Course in Strategic Management from CDM, Secunderabad (AP) and Specialized Advance Negotiation Skills course with unique distinction. He's qualified International Event Veterinarian from Switzerland and was Vice President (Vet) of Equestrian federation of India for two years. Lt. Gen. Kanwar was awarded with Addl DG RVS Trophy during 2002, QMG's Trophy during 2006, Commendation Card from the Vice Chief of Army Staff in 2009 and awarded Vishisht Sena Medal (VSM) during 2014. He rose to become the Director General of the Service Remount Veterinary Services to lead the RVC from 01 Apr 2013 to 31 Aug 2014.

In recognition of his overall contribution in development of Veterinary Sciences in the country, Lt. Gen. Kanwar was awarded the Fellowships of the Indian Association for the Advancement of Veterinary Research (FIAAVR), National Academy of Veterinary Sciences (FNAVS) & Indian Association of Veterinary Pathologist (FIAVP). As DG RVS, Lt. Gen. Kanwar was an Ex-Officio member of the Governing Council of the National Academy of Veterinary Sciences (India). The Academy mourns the loss of this brilliant Army veterinarian of repute and extends its heartfelt condolences to the members of his family. We pray for the departed soul to rest in peace.

## **6-B: Appointments, transfers, promotions, awards, honors and felicitations**

### **6-B.1: Dr. D.V. Reddy gets VASREF Fellowship**

Dr. D.V. Reddy writes to inform that Veterinary & Animal Science Research Foundation (VASREF) has conferred its Fellowship upon him. Prof. D. Venka Reddy, the former Dean, Institute of Veterinary Education and Research, Puducherry-605005, was awarded the VASREF fellowship in recognition of his momentous contribution to veterinary and animal science, in the year 2016. VASREF a consortium of outstanding farm animal scientists and have their Regd. Office at BM-2, V.S.S. Nagar, Bhubaneswar, Odisha, India-751007 Registration ID: 1081509289/07-09-15/ D.S.R.O. (K), Bhubaneswar, India; Website: [www.animalsciencereporter.com](http://www.animalsciencereporter.com).

Dr. D.V. Reddy is a NAVS (India) Fellow and we congratulate him on this felicitation on behalf of the Academy. His contact is: [dv.duvvuru@gmail.com](mailto:dv.duvvuru@gmail.com); Mobile: 09486535293.

### **6-B.2: P.A.U Veterinary Alumnus is Assoc. Deputy Minister in Canada**

"Alumnus of College of Veterinary Sciences, PAU Ludhiana (now in GADVASU) Dr. Harpreet Singh Kochhar has been appointed as Associate Deputy Minister in Canadian government". Canada's chief veterinarian has left the Canadian Food Inspection Agency to serve as the new associate deputy minister for Immigration, Refugee and Citizenship Canada. Dr. Kochhar was appointed Canada's chief veterinarian in January 2014 and has served as CFIA's associate vice-president of operations since May 2015. Prior to his appointment, he worked as a senior animal biotechnology policy specialist at CFIA. Dr. Kochhar did his BVSc & AH from COVSc. PAU, Ludhiana in eighties. Canada's deputy chief veterinarian Dr. Jaspinder Komal will serve as acting chief veterinarian, CFIA said. Congratulations to all Vets in Canada. We are proud of you Dr Kochhar.

### **6-B.3: Lt. Gen. A.J. Singh Takes Over as DG RVS**

Lt. Gen. A.J. Singh, VSM, who was commissioned into Remount Veterinary Corps in Feb 1982, assumed the appointment of Director General Remount Veterinary Services (DG RVS) on 30 Jun 2016 and Colonel Commandant on 14 Dec 2016.



Lt Gen Amolak Jit Singh was born on 1<sup>st</sup> October 1957 in Gurdaspur (Punjab) and received his Bachelor's Degree in Veterinary Science & Animal Husbandry (B.V.Sc. & A.H.) from Punjab Agricultural University (PAU), Ludhiana (now in GADVASU) in 1981. He got the National Diploma in Equine Husbandry Medicine & Surgery from Indian Veterinary Research Institute, Izatnagar in 2005 and has attended the prestigious

Senior Defence Management Course at College of Defence Management, Secunderabad as well as International Equitation Course from Army Equitation School, Dublin, Ireland in 1998.

Lt. Gen. A.J. Singh, is the Vice President (Veterinary) and National Head Veterinarian of Equestrian Federation of India. He is an ex-officio steward of Indian Polo Association. He is presently a Federation Equestrian Internationale (FEI) official veterinarian in disciplines of Eventing, Dressage and Show Jumping.

In a sterling military career spanning over 35 years, the General Officer has tenanted various prestigious administrative, logistics and professional appointments. His professional experience includes a total tenure of 10 years as Instructor at RVC Centre & College and also Staff appointment at Headquarter Division/Command and Directorate General Remount Veterinary Services. He also holds the distinction of commanding 3 RVC units including Equine Breeding Stud, Babugarh. He has a rich experience of having served for 17 years in different establishments with civilian personnel. Prior to taking over of the appointment of DG RVS, the General Officer served as Addl DG RVS.

Lt. Gen. A.J. Singh is an outstanding sportsman, and has won many medals at national/international levels in equestrian sports including Bangkok Asian Games in 1998, and also coached the Indian national equestrian team to medal winning performances in two Asian Games at South Korea in 2002 and Doha in 2006.

Lt. Gen. A.J. Singh is highly decorated and is the proud recipient of Vishisht Seva Medal, two Chief of the Army Staff Commendation Cards and two Army Commander's Commendation Cards. As DG RVS, Lt. Gen. A.J. Singh is an Ex-Officio member of the Governing Council of the National Academy of Veterinary Sciences (India). His email ID: [ajsinghrvc@gmail.com](mailto:ajsinghrvc@gmail.com)

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## **7. VIEW POINT**

### **7.1: Human Capital at Veterinary Institutions (Constraints in quantitative and qualitative terms)**

**Dr. Jitendra Singh Bhatia**

A viable teaching/ scientific institution rests on four primary pillars which include; (I) optimum infrastructure including location of the institute (2) availability of competent, qualified and committed manpower (3) good and relevant academic programs and (4) sound fiscal resources.

These pillars get stability and strength from (I) Enabling environment at the institute (II) commitment & dedication of the faculty & other supporting staff (III) leadership-competence, ability, attitude & involvement (IV) regular and timely flow of funds (V) modern governance and administrative set up coupled with fiscal discipline (VI) appropriate distribution of powers and authorities down the line (VII) selecting/appointing the most suited person for the job (VIII) collective wisdom, (IX) personnel policies & programs conducive for growth and (X) planning, prioritisation, monitoring and mechanisms for mid course corrections in place. Complete functional Autonomy (both academic and governance including financial management), is one of the critical over-riding factor.

Despite, the fact that the viability and sustainability of a teaching organisations depends on multiple complex integrated factors (a few of these have been spelt out above) but the most crucial being the men in the system. It is an established fact that in present scenario, available human resource to manage veterinary institutions are not merely low in numerical number (stands at 30-60% at different institutions of the requisite strength) but alarmingly falling short of expected quality index when viewed from the national/global perspective\*. Even this level of numerical strength has become possible because of the consistent strong regulatory pressure on the States from the Statutory authority-Veterinary Council of India (VCI) for the last over 2 decades. Further, irony of the situation is that at many places, the faculty teachers are either not fully equipped in terms of latest knowledge, skills or laboratory support system that include technical/ laboratory manpower, equipment and or animal/ biological material or they lack commitments or uncongenial environment. At some institutions, teachers are assigned other non- academic activities (due to paucity of administrative staff) that consume lot of their time which ought to have spent with the students in teaching courses or devoting for academics.

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\* This statement may not be misconceived as India has sizeable number of capable and outstanding professional/ scientist/ academicians. General trends have been projected.

## Addressing the manpower needs

Fulfilment of manpower needs and further, transforming the faculty into capital assets (quality teachers) for an organisation, calls for meticulous planning and effective implementation. The Veterinary institutions are created by the State Governments. Besides, providing basic infrastructural needs for establishing an institute, the State has lifelong obligations to provide needed manpower.

However, to transform the new entrant (raw material) into a valuable and dependable asset is a complex mechanism that requires unified approach from the Governments (Union and States), the regulatory authorities, the universities/college/ department, and above all, the personal aptitude and willingness of the faculty. Some compelling issues and the possible approach in addressing quantitative and qualitative fulfilment of human needs are reflected as under:

- Ø Fulfilment of basic/ primary human needs of an organisation/program: Before commissioning any program, the institute must be given a clear road maps to induct/ manage desired human resource. While according an approval for a program, the Government or the agency must ensure providing all necessary pre-requisites (may it be categorised into phases) in one go. It may then be left to implementation agency- the university/ institute to cover up as and when the need arises. The institute are dynamic organisations and it has to be on toes to maintain a balance in effectively carrying out is mandated activities. Delay in substitution of competent manpower may sometime puts the ongoing activities to a grinding halt.
- Ø Attrition rate at the established institution is around 5-7% due to superannuation and equal proportion or even more are migrating/ leaving for various reasons especially from the base cadre. *The government / academic regulators have yet to come out with any structured arrangements to cover up this visible gap occurring due to retirement.* The senior person when retires, invariably creates a vacuum unless there is a second line in command. Replacement sometime becomes a difficult proposition. Procedural delays in getting approval to fill the created vacancies aggravate the situation. The Institutions besides, losing experienced talent that it has groomed over the last 25-30 years, the numerical strength of the faculty is progressively on the decline. Ideally, the Vice Chancellor should have the authority to prepare itself well in time to fill the gap well before superannuation of an employee. It may be seen adversely on the University authorities for not finding a suitable replacement for the employee superannuating well in time. Likewise, the regular teacher if leave in the mid course, the university should have full authority to fill replacement by following the defined procedures.
- Ø Fulfilment of qualitative gaps: Recruitment at the entry level (may even selecting amongst the best available) are raw ingredients in the educational system. Many universities have introduced Induction Course to orient the recruits on various facets of an organisation. Teaching and academic communications with students are highly specialised job/ skill. An ideal teacher has to be a good learner first. Conducive environment at the institute/

department helps the teacher to build up confidence. Teacher, how experienced he/ she may be, has to recognise that regular interactions with the students, besides, at scientific forums helps in sharpening knowledge and skills

- Ø A teacher is a facilitator/ navigator. Ideally in a class, about  $\frac{3}{4}$ th of the students are of average IQ and if, exposed to proper guidance, they can effectively carry forward their academic pursuits timely. In addition, invariably there is equal distribution of students from above average IQ strata (intellect class) and below average (weak lot). The students from lower Strata group are the most neglected slot. In fact, they are made a condemned lot. Do we have any institution that provide special/ extra care for these slow learner or off the track group? I hope hardly any. The challenge before the institution should be to morally uplift their level of confidence of weak lot and there should be jointed efforts to build their competence progressively. A great persuasion, patience and hard work is required to up-bring them to the main stream. It is this *bottom up approach* that makes an institution/ teachers great. The greatness of a navigator is judged from the way he carries home the slow learners along. One of the parameter of assessment of the quality of an institute should include as to how far the institute has succeeded in revitalising rock bottom class of students to productive end.
- Ø Competence enhancement programs: Large numbers of short term training courses (1/2 days to 2/3 weeks) are available through the Aggies of the ICAR. Other scientific organisations of national and international repute have also opened up to update knowledge and sharpen skills courses for the young faculty through organising trainings. It also is a happy situation that expertise available with some of the institute/ department is shared with other sister organisations. Centre of advance studies (CAS) are mandated to impart such trainings. However, in some newer disciplines, faculty fails to get update or remain handicap to make use of newer technologies learn towing to lack of facilities in place at their own institution. Further, three to six months certificate courses are conducted in diversified spectrum of veterinary and animal science. There is relatively low participation from some institutions especially when these courses are organised nationally. The probable reasons include- university/ colleges are unable to spare the services owing to non-availability of substitute or the teacher himself is reluctant to move on the pretext of his/ her family compulsion. Long duration degree course(master' or doctorate)-ideally ample provisions do exist almost in all the universities. Moreover, the teachers are also keen to draw benefits from such schemes but many a time it gets delayed mostly on account of non availability of a substitute at the college/ campus. Study leave rules for the faculty in some of the universities are not in tune with the National policy.
- Ø Provision of sabbatical, adjunct professor, visiting scientist/ professor exist merely on name sake. A very few institute/faculty take advantage of such schemes.
- Ø Mobility of scientists or induction of new talent at higher/ senior positions have become a far cry. The manner of implementation of the Career Advancement Scheme (CAS) has raised doubts on the sustenance of quality. The competitive spirit amongst the faculty has completely vanished. Over 75% of the faculty has reached to the highest ladder without having faced a single competition. In addition In the existing scenario where agricultural institutions (include veterinary), are State controlled organisations and thus, there

remained internal pressure in selection of a leader. Further, inbreeding has become the call of the day. A clear distinction is visible at National Institutes (IVRI, NDRI, CIFE) and that of State Agricultural/ Veterinary University. The former exhibits national character, while the later is heavily loaded with faculty from within the State. Data base of some of the universities does reflect some senior faculty from outside the state on their roll. But In fact, these are the people who had joined the university at base cadre and permanently made the state their home. For all practical purposes, they become inhabitant of the State. Factually hardly any one venture to join other SAU/ SVU on senior faculty positions including Dean/ Director.

- Ø **Quality enhancement and assuring competence of the faculty:** Presently there is no well defined system to monitor the competence of a teacher or his ability in curricular delivery and other associated teaching functions. Invariably new entrant are assigned teaching responsibilities even without providing him the opportunity to get acquainted with the various facets of even physical inputs and support system available in the department. Initially the new recruit should be attached with a senior faculty member for needed guidance and assistance. Further, he/ she is made to attend all academic UG programs of offered in the department for complete academic cycle. His role would not be limited to attend lectures of senior faculty but he should be gradually asked to summarise what has been taught and initiate discussions there on, in the class. Such exposures at the entry level would help one to get acquainted with composite departmental activities, shall be able to sharpen his knowledge & skills and learn the manner for effective delivery. Besides, one will gain confidence in discharging his core responsibilities of teaching and training. **Teacher' specialisation:** It invariably has been a practice at most of the colleges/ departments that teachers classify themselves as specialist cadre and offer themselves available to teach well within their specialisation even at U.G level. Such distinction hold good only at PG level, however, all teachers of the department irrespective of their specialisation should be made to rotated in different courses to enable them to cover the entire spectrum of UG education of the department.
- Ø **PG Education (M.V.Sc & Ph.D.):** There is ample scope in up scaling PG education. There is dearth of specialised and super specialised cadre of faculty to impart even core courses of masters and or doctoral programs at most of the institutions. Further, infrastructure wise, the departments are not fully equipped to exposed the students with latest technological knowhow. Many of veterinary universities have multi-campuses to impart PG educations. There are great variabilities in infrastructural and manpower power facilities between the headquarter campus and at the out stations. Although in commensuration to the needs, good facilities and competent senior faculty is positioned mainly at the main campus, but irony of the situation is that the students pursuing education at out stations rarely get a chance to meet expert faculty and hardly get exposed to advanced laboratories/ research stations available well within the university. There appears compartmentalisation within the university system and different units are functioning as independent identity. Mobility of scientist between different university campus is very limited or even non existent. It is equally true that many high end and sophisticated equipment have been piled up at some off campuses but are not in effective use owing to

non availability of competent manpower. The university should consolidate its PG programs at those campuses which have optimum facilities for a particular program. Concerned faculty should be oriented to handle use of sophisticated equipment.

- Ø Services of retired faculty and making use of the scientific manpower available from sister organisations and line departments would ease out in managing educational needs.

### *Epilogue*

*The situation may appear gloomy while making a cursory reading of the text. However, deep insight to the note does reflect, that within itself, the system has lot of flexibility and leverage for correction and improvisation. Retuning of national policies and programs in consonance with ever changing needs, coordinated Centre-State relationship, adequate support and fiscal consolidation, optimisation of internal resource generation, functional autonomy to the institutions, consolidation of programs within the university, sharing of resources- infrastructure, human and animal resources, structured linkages with sister organisation and restraining to venture for unplanned expansion (proliferation) without proper support system etc. would transform the system well within the existing resources. Resource gap would continue to exist but there is a need to prioritise and manage the activities well within the available. Setting priorities, curtailing wasteful expenditures, sharing and efficient utilisation of the resources, targeting for income generating schemes and protecting its wealth are of paramount significance for a disciplined organisation. The Universities are primarily meant to produce competent human resource in the areas falling well within its domain. This should not be lost sight of at any cost. Research is an integral component of higher level of education. Extra mural funding through research grants forms the building block for quality and high order training. Thus the departments are the basic units to generate newer technologies and their relevance is judged through transfer of technological practices. Students participation in such practices occupy a significant role. But in the process of development of an institute, it must always be ensured that there is no drift from its primary focus of producing quality graduates - the main building unit of the profession.*

*It is not at all professed that additional support is not needed. Efforts should be a continuous process to garner support to enable the institute to effectively sustain its activities and also strive to fulfil its mandated function. Far-sighted vision and striving for excellence should always be top on its agenda. However, it has been emphatically stated that the Institute should not plan its expansion merely on presumptions but on the basis of dependable commitments and or with the solid base foundations it has created of its own which should have capacity and capability to sustain its program(s)*

**(Dr. Jitendra Singh Bhatia is the Former ADG (Education), ICAR)**

## 7.2: Buffalo Seeks New Relationship Norms with Budding Commercial Dairy Farmers

### Kuldeep Sharma

Dairy farming has been treated as a part time vocation by most of the farmers in the country and at commercial scale it has never been considered a true farming activity. Most of the peri-urban buffalo farms in the country which fetches maximum value addition due to high fat and healthy perception of buffalo milk, have always thrived mostly on industrial wastes along with dry fodder on one hand ,and rotation of dry animals till they become pregnant on the other hand.

Since 2011, we have seen a lot of traction in dairy farming business and in most of the cases the young entrepreneurs were looking at Cross bred cows as their first choice. The reasons were quiet judicious due to high productivity and better key performance indicators, in terms of age at first calving, inter-calving period and longevity of lactation for animal to be in milk. Commercial dairy farms with cross bred cows are also the first choice of entrepreneurs as it gives a better perceptual feeling of being high tech in nature.

The changing dynamics at socio cultural level in the country, has put a lot of pressure on understanding the future of cross breed cows farming in India ( primarily due to lack of clarity in communication by the government on its policies about these exotic breeds). Desi cows seem to be the best option as on date due to much of consumer awareness and support statements by various stakeholders (like the respectable Chief minister of UP has announced a long term perspective on making cows farming sustainable in their state through their Kamdhenu scheme) in last fortnight only. However due to strict enforcement on cow slaughtering, and untoward incident by some culprits for cows in transit has created a shocking situation for the cow lovers as well as farmers.

Under the current scenario, thus, we feel that Buffalo is emerging as a right choice for our country for dairy farming and sustainability. Now its high time for the think tank of Indian dairy sector, like ministries and Neeti Ayog to develop a long term plan for buffalo farm development in the country by identifying the critical areas of genetic improvement, cattle health, nutritional programs, conservation and production of high quality semen, developing a large inventory of quality bulls and supporting semen station or even embryo transfer for quick results.

*The government could also see controlled use of certain growth hormones which are harmless to life by setting usage protocol and product approvals through FDA, using most stringent standards as done in developed world like USA etc. Such initiative might also make moderate to high yielding desi cows also to perform better and thus becoming sustainable.*

This is high time for the country to identify a new relationship with buffalo, like it has been for cow since ages. Unlike cow who is being treated as mother, a buffalo does not even enjoy the status of being an aunt, even though the outcome is the same Milk ( and that too with slightly higher fat ) :

With over 50 % of milk from buffalo, it is most acceptable taste wise in most part of the country and could be a good source for making value added products with better conversions, in products like cheese, panir, butter, ghee etc. (Kuldeep Sharma, is the Chief Thinking Officer, Suruchi Consultants (ISO 9001:2008 Company), C-49 Sector-65, Noida 201307; +91-98 10 31 58 31 +91-120-4320845)

### **7.3: Fostering Innovations in Fisheries and Aquaculture: Focus on Sustainability and Safety**

Asian Fisheries Society Indian Branch (AFSIB) Fostering Innovations in Fisheries and Aquaculture Focus on Sustainability and Safety KOCHI KERALA, INDIA 21 to 24 NOVEMBER 2017 [www.11ifaf.in](http://www.11ifaf.in) ICAR - Central Institute of Fisheries Technology isheries sector plays a very important role in the economics, Fsocial and nutritional well being of people in the Asian countries, which often figures as an important component in rural development and poverty alleviation. In India, the sector has been recognized as a powerful income and employment generator to over 14 million fishers and farmers. The sector offers cheap and quality animal protein to the people ensuring nutritional security. With a value of fisheries export of about Rs.30,000 crores, the fisheries sector plays a major role in stimulating and strengthening the economic growth of the nation. The Government policies are also attuned towards ushering 'Blue Revolution' (Neel Kranti) by sustainable utilization of fisheries wealth of the country for improving the lives and livelihoods of fishers and their families. However, several issues such as overfishing, stagnation of marine fish production, impact of climate change, disease in aquaculture and quality of sea food and trade related issues have emerged in recent years. All these, call for an integrated strategic planning at the national level to take stock of our achievements, capabilities, challenges as well as opportunities. The Asian Fisheries Society - Indian Branch (AFSIB) (Regd. No. 41/87-88) since its inception in 1986, has been providing a platform for discussion at the national level on issues related to research, development, education and policies by organizing Indian Fisheries & Aquaculture Forum (IFAF) every three years in different parts of the country. The 11th Indian Fisheries and Aquaculture Forum (11th IFAF) will be hosted by the ICAR Central Institute of Fisheries Technology (ICAR-CIFT), at Cochin, Kerala during 21-24 November, 2017. It would provide a comprehensive outlook for the Fisheries and Aquaculture sectors, for achieving greater synergy among the stakeholders and planning strategies for capture fisheries and aqua farming to build higher levels of sustainability and profitability in line with Blue Growth Initiative.

Provide a scientific platform to deliberate on the current research outputs and identify the research and development needs of the sector Nurture innovation skills to address issues of sustainability and safety of fish. Encourage scientists to think, develop and undertake need-based research to address core issues affecting fisheries sector To review the research developments in fisheries science and develop strategies for transfer and refinement of these technologies. 1. Fisheries Resources: Genetics, Biodiversity and Management 2. Fishing Systems for Sustainable Fisheries 3. Fishery Biology, Toxicology and Environment 4. Aquaculture production 5. Aquatic Animal Health Management 6. Adding Value to Fish: Avenues in Fish Biochemistry & Processing 7. Safe Fish: Quality, Risk Assessment and Regulations 8. Fishomics and Frontier Sciences for Blue Bio-economy 9. Socio-Economics, Gender, Capacity Building and Livelihood 10. Fisheries Trade, Policy and Governance The authors of the accepted research papers can present their papers in oral/poster sessions during the forum. The details of oral/poster sessions will be updated in the website: [www.11ifaf.in](http://www.11ifaf.in). OBJECTIVES TECHNICAL SESSIONS image CLIMATE CHANGE AND FOOD SAFETY ISSUES is scheduled to be held during the forum on 22 November 2017. SEAFOOD PROCESSORS CONCLAVE An interaction of the fishers, aqua farmers, entrepreneurs, scientists, policy makers and other stake holders will be organized during the forum to get feedback on the emerging policy issues and for reprisal of the concerns of the stakeholders in the industry. REGISTRATIONS ONLINE SUBMISSION OF ABSTRACTS Contributors are required to submit extended abstracts online. Kindly logon to the website [www.11ifaf.in](http://www.11ifaf.in) for updates regarding submission of abstracts PUBLICATIONS OF THE FORUM The papers presented in the forum will be subjected to scientific review for publishing in journals with high impact factor. The details of the journals will be uploaded shortly in the website. EXHIBITION The premier Research Institutions, NGOs, State Governments, and Entrepreneurs etc. will take part in the exhibition that will be arranged at the venue of the forum. AFSIB GENERAL BODY & ELECTIONS The general body and election of AFSIB will be held during the forum to elect the new Chairman, Vice-Chairman, Secretary, Treasurer and Executive Members. The necessary notice will be circulated by the Secretary, AFSIB. Members of AFS/AFSIB Non-members of AFS/AFSIB US \$ 250 US \$ 300 US \$ 250 US \$ 300 Members of AFS/AFSIB Non-members of AFS/AFSIB Students Observers & Spouses\* `6000 `8000 `4000 `3000 `8000 `10000 `5000 `3000 Early bird REGISTRATION Late / spot REGISTRATION An online portal for registration will be shortly available in the site and the applicants can pay the registration charges online. SYMPOSIUM INTERNATIONAL \*Includes charges for participation in the forum and working lunch and tea, but no conference kit would be provided. POST-FORUM TOURS Kochi (colonial name Cochin) also referred to as the "Gateway to Kerala", is a vibrant city situated on the south-west coast of the Indian. It is rated as the top three tourist destinations by the World Travel & Tourism Council and featured in National Geographic Traveler's '50 greatest places of a lifetime' and has a lot of tourist attractions and places to visit in and around. The details regarding the post-



forum tour will be uploaded shortly in the site [www.11ifaf.in](http://www.11ifaf.in) DATES TO REMEMBER Submission of Abstracts: 1 April -1 May 2017 Communication of Acceptance of Abstracts 31 July 2017 Last date of Submission of Application for Awards 30 June 2017 Last date of Submission of Full Paper: 31 September 2017 Last date of Submission of Application for Shri J.V.H. Dixitulu National Award: 15 August 2017 The application should be sent to the Convener of the J.V.H. Dixitulu Award – The President, MBAI, CMFRI Campus, Post Box No. 1604, Kochi -682 018, Kerala, India. The last date for receiving applications by the President of MBAI is 15th August, 2017. Eligibility: Scientists and Research Scholars below the age of 35 years (as on 30th June 2017) working in the field of fisheries related disciplines. The award carries a cash prize of `1000 and a citation. (up to 10 awards) Young Scientist Award Eligibility: Persons involved in Fisheries research and development, below 50 years as on 30th June 2017. The award carries a cash prize of `10,000 a medallion and an invitation to deliver keynote address at the forum. Prof. H.P.C Shetty Award Eligibility: Applicant should be below 35 years (40 years in the case of women) as on 30th June 2017, preferably carried out his/her work in India and has worked towards aquaculture development through research. Award carries a cash prize of `10,000, a medallion and an invitation to deliver keynote address at the forum. Professors T.J. Pandian and A.J. Matty Award Eligibility: Outstanding work on any aspect of aquaculture (research/ extension/ development) carried out in India by an individual, group or organization (government or private). The award carries a cash prize of `25,000 and a citation and invitation to deliver keynote address during the forum. Dr. Pillay Aquaculture Award Details about the above awards can be obtained from the Secretary, AFSIB Building, College of Fisheries Campus, Kankanadi, Mangalore – 575 002, Karnataka. The applications should reach the Secretary latest by 30th June 2017. (A link will be provided in [www.11ifaf.in](http://www.11ifaf.in)) Eligibility: Outstanding contributions in the field of fisheries extension / c o m m u n i c a t i o n i n I n d i a b y individuals /institutions / NGOs. The award will carry a memento, citation and cash award of `15,000 and invitation to present the work at the forum. Shri J.V.H. Dixitulu National Award for Outstanding work in Fisheries Extension/ Communication AWARDS th 11 INDIAN FISHERIES AND AQUACULTURE FORUM 21-24 November, 2017 This award is for best innovation by a fish farmer. The award carries a cash prize of `25,000 and a citation. Dr. M. C. Nandeesh Award Dr. Ravishankar C. N. Convener, 11th IFAF, Director, ICAR-Central Institute of Fisheries Technology, Willingdon Island, Matsyapuri (P.O.) Kochi - 682029, Kerala, India. Phone: 0091-0484-2412300 Fax: 0091-2668212 e-mail: [11thifaf@gmail.com](mailto:11thifaf@gmail.com) Secretary Asian Fisheries Society Indian Branch (AFSIB), College of Fisheries Mangalore - 575 002, Karnataka, India. Tel: 0091-824-2249256/ 2249257/ 2249258 Fax: 0091-824-2248366 E mail: [afsib.secretary@gmail.com](mailto:afsib.secretary@gmail.com); [afsib2005@yahoo.co.in](mailto:afsib2005@yahoo.co.in) For Updates kindly refer the website [www.11ifaf.in](http://www.11ifaf.in) (Based on Information on <http://www.icar.org.in/>)

## **7.4: Tiny bubbles and a bit of gene therapy heal major bone fractures in pigs**

**Robert F. Service**

It takes more than a cast and a little time to heal many broken bones. Whether it's a soldier wounded in battle, a car accident victim, or an elderly person who has fallen, bone damage can be so extensive that the bones never heal properly, leaving people crippled or with other severe problems. Now, researchers have combined ultrasound, stem cells, and gene therapy to stimulate robust bone repair. So far the work has only been performed in animals. But it has already been so successful that it's expected to move quickly toward human clinical trials.

The new research "has huge clinical significance," says David Kulber, who directs the Center for Plastic and Reconstructive Surgery at Cedars-Sinai Medical Center in Los Angeles, California, and who was not part of the study. "The technology of being able to stimulate bone growth is really remarkable."

It's also one for which there is a glaring need. In the United States alone, some 100,000 people a year suffer from what is known as a nonunion fracture. In these cases, parts of a bone may be missing altogether or so badly splintered that the bone can't be reassembled. In such cases, doctors typically graft other bone into the site. Ideally this bone comes from the same person—often taken the pelvis, a painful procedure that compounds a person's injuries and recovery time. When this isn't possible, physicians will turn to cadavers for the extra bone. But this bone must be sterilized before it's implanted from, robbing it of proteins and other signaling molecules that encourage its re-growth once transplanted, and lessening the chances of a full recovery.

Researchers have long tried to improve matters by growing new bone without use of a graft. To do so they typically first fill gaps in bone with a natural scaffolding material called collagen. This scaffolding encourages a person's own bone-forming stem cells, called mesenchymal stem cells (MSCs), to migrate into the area. The trouble is MSCs don't only differentiate into osteocytes, the bone-producing cells, they can also develop into either fat tissue cells or scar tissue. Researchers have tried for years to steer MSCs into becoming osteocytes by exposing them to one or more bone morphogenetic proteins (BMPs), signaling molecules that trigger the cells to transform into bone-forming cells. But for this differentiation to occur, MSCs must be exposed to BMPs for up to a week. Yet if the BMPs are simply injected into the site of a fracture, they dissipate in just hours.

In an effort to produce a lasting BMP signal, researchers led by Dan Gazit, a regenerative medicine expert at Cedars-Sinai, as well as other groups, have previously turned to using viruses to introduce extra copies of BMP genes into MSCs so that the cells themselves will produce the proteins long enough to trigger their own differentiation. But success has been halting here, too.

Over the last several years, Gazit's team—among others—has developed an alternative strategy for efficiently getting genes into MSCs without viruses. The researchers start by packing the wound with the usual collagen matrix and

waiting for a couple of weeks for the stem cells to infiltrate the scaffold. They then create a solution containing numerous copies of their gene of interest alongside gas-filled micron-sized bubbles encased by a thin shell of fat molecules. After injecting this solution into the fracture site, they go over the area with an ultrasound wand, much as it's done by obstetricians to check on the health of a fetus. The wand's ultrasound pulses burst the micro-bubbles, briefly punching nano-sized holes in any adjacent stem cells, which allows the genes in the solution to enter.

In 2014, Gazit and his colleagues reported that they used this procedure to introduce non-therapeutic reporter genes into large fractures in animal models. But when they used the procedure to introduce genes for two different BMPs—BMP-2 and BMP-7—they detected some bone re-growth in the animals, but not enough to heal the fractures.

Gazit's group has gotten better results by using the same approach to insert copies of the gene for BMP-6 into pigs that had been surgically given 1-centimeter gaps in a leg bone. After waiting 8 weeks, they found that the bone gap was closed and the leg fracture was healed in all of the treated animals. In fact, the procedure was so effective that the fractures healed as well as when bone grafts were carried out using bone from the same animal, the currently preferred treatment, they report today in *Science Translational Medicine*.

The results are “just the type of thing we need to move this field forward,” says Johnny Huard, an orthopedics researcher at the University of Texas Health Science Center in Houston. However, he notes, the pigs used in this study were all under 1 year in age. Younger animals, including people, tend to have far more MSCs than older ones, he says, yet large fractures are far more common in the elderly than the young. So Huard suggests that before the approach is ready for testing in people with bone fractures, it would be good to first see whether it's equally successful in older animals.

(Posted in: [Health Technology](#) ; DOI: 10.1126/science.aal1205)

## **8. NATIONAL & INTERNATIONAL VETERINARY NEWS**

### **8.1: Kamdhenu University's Modern ambulatory services**

Dr. D. B. Patil, Director of Research & Dean PG Studies, Kamdhenu University, Gujrat, writes to inform us that the University, in one of its pioneer



initiatives, started its ambulatory services at village Sanoda, Taluka: Dehgam, Dist: Gandhinagar in July 2016. This service includes the facility of portable ultrasonography machines. Over a period of one year since its inception, more than 1303 animals of different species have been treated at the ambulatory clinic. They have experienced that pregnancy can be confirmed by per rectal examination during 90-

110 days after artificial insemination or natural service; whereas Ultrasonography aided pregnancy can be confirmed on day 28. Kamdhenu University possesses two portable BCF Easi scan machines which are used in field conditions.

## **8.2: World Zoonosis Day: 7<sup>th</sup> National Conference held in Delhi**

The 7<sup>th</sup> Annual National Conference on Scientific Updates on Zoonotic Disease Control was held on 6<sup>th</sup> July 2017, at the All India Institute of Medical Sciences (AIIMS) to celebrate the World Zoonosis Day. The conference was organized jointly by Millennium India Education Foundation (MIEF) and the Division of Clinical Microbiology and Molecular Medicine, AIIMS, New Delhi. 132 delegates comprising of Medical, Veterinary and Ayush practitioners, PG students, & researchers from Izatnagar, Mathura, Hisar, Ludhiana, Chandigarh, Shimla, Jaipur, Ahmadabad and Delhi took part in this conference. This conference focussed on multi-disciplinary collaboration for promoting animal and human health and will provide a common platform for veterinary, medical and environmental professionals where they can interact with each other and share their experiences in preventing the spread of these diseases.

In his welcome speech, the convener of the conference Dr Uday Kakroo, Director Millennium India Education Foundation, informed that about 68 per cent humans in India are in direct close contact with animals and are often not far from wild life. He further emphasized that the cases of zoonotic diseases, particularly in rural area, mostly go unnoticed /unreported because of inadequate diagnostic facilities, unfamiliarity of Veterinarians & Medicos with these infections & lack of coordination between them and the livestock owners. Prof. Sarman Singh, Organizing Chairman of the conference & Head of Division of Clinical Microbiology and Molecular Medicine, AIIMS said that WHO is now emphasizing on One Health approach to understand and prevent the growing incidences of zoonotic diseases because the human and animal health and the environment were inextricably linked. He recommended the protection of the health and well-being of all living things by enhancing the inter-sectoral cooperation and collaboration among veterinary, medical and environmental professionals in the country. Dr A C Dhariwal, Director, National Centre for Disease Control (NCDC), stated in his key note address that the country urgently needs to build bridges of cooperation between medicos, veterinarians and environmentalists working in all governmental as well as non-Governmental organisations. All stake holders must come forward and associate with NCDC to take forward these initiatives. Padmashri Dr K K Aggarwal, National President, Indian Medical Association and President, Heart care Foundation of India put forward a resolution to form a task force on zoonotic disease control involving medical and veterinary experts, environmental scientists, NCDC& other government health institutions, who would deliberate on various zoonotic diseases of utmost importance in the country and discuss and form preventive guidelines. He suggested that

whenever we talk of family, pets should be included as integral part of the family. This suggestion was welcomed by all present and a resolution was adopted. Some of the eminent veterinary experts who spoke at the event included Dr P K Uppal, Animal Husbandry Advisor, Govt. of Punjab, Dr Ramesh Somvanshi, Scientist Emeritus IVRI Barielly and Dr B N Tripathi, Director National Centre for Research in Equines, Hisar. Other speakers at the conference included Dr Jyoti Misri, Dr Kamlesh Upadhyay, Dr Omesh Bharati, Dr Mala Chhabra, Dr D C Jain, and Dr A K Bhatia from ICAR, Ministry of Agriculture GOI, BJ Medical College Ahmadabad, Himachal Pradesh Health Services, IVRI, Izatnagar, Zoonosis Division, DGHS Govt.of India and GLA University Mathura. The experts spoke on most emerging and reemerging diseases that are showing up in the country and shared their respective knowledge gained from their field and research experiences.

**The conference adopted the following resolutions:**

- 1. A national task force comprising of medical, veterinary and environmental experts from government and non-government organizations including representatives from medical and veterinary academia, NCDC, Ministry of environment & Forest and IACR should be formed immediately. The members should meet frequently using digital media like skype, whatsapp, Facebook etc. and discuss the strategies that should be adopted to increase disease awareness, outbreak news and surveillance, share scientific knowledge and frame preventive guidelines, treatment regimens in both human and animals for early diagnosis and treatment of these zoonotic diseases in the country.**
- 2. MCI should be requested to included Zoonotic Diseases in the MBBS syllabus**
- 3. Veterinary Public health specialists should be made part of National Health Mission.**
- 4. Veterinary Public Health specialists should be part of National Disease Surveillance Program in the country and their role to be clearly defined so that the disease pattern of many emerging and reemerging diseases that are showing up in different places in the country and most of which are going undiagnosed/unreported, can be noted.**
- 5. Joint pilot studies need to be taken up by both Medical and Veterinary fraternities to do epidemiological studies of emerging /re-emerging diseases in particularly endemic areas so that shift in disease patterns are known and accordingly preventive measures taken in both the segments.**
- 6. Economic Impact studies in any zoonotic disease outbreak in human need to be studied,sothat prevention and control guidelines are framed well in advance jointly by both medical and veterinary fraternities. Economic impacts are currently being studied only in veterinary sector. The impact studies can record and morbidity, mortality and no of leave days a patient suffering from any zoonosis infection (Japanese encephalitis, swine fever, bird flu, laboratory animal acquired infection, & other such diseases etc.) avails before returning to his/her work etc.**

### **8.3: Thailand committed to defeating human rabies by 2020**

Thailand has witnessed a substantial decline in the number of human rabies deaths reported from almost 200 a decade ago to fewer than 8 in 2015 thanks to high-level commitment and the accessibility of life-saving post-bite treatment (post-exposure prophylaxis, PEP) for animal bite victims. Although challenges remain, the personal involvement of Her Royal Highness Princess Chulabhorn has contributed to promoting the mass vaccination and management of dogs and enhanced awareness of rabies. *“To eliminate rabies, you have to give people the knowledge they need and also teach them about their responsibilities,”* said Professor Dr Her Royal Highness Princess Chulabhorn Mahidol who visited the World Health Organization’s headquarters in Geneva on Monday 28 August. *“I have seen so many people die of rabies and at one point, even in my father’s palace, there were cases of rabies. I took the responsibility of looking after rabies and we are working very hard to put in place the infrastructure needed to eliminate the disease.”* Her Royal Highness’ commitment celebrates the progress, innovation and leadership Thailand has shown in accelerating efforts to eliminate human rabies deaths by 2020. Her involvement has helped to engage and motivate the public to prevent rabies, from the village to province to national level.

*“Villages are far away from operation rooms of cities and Bangkok. We need mobile units so that we can go anywhere to provide care to people and service the dogs as appropriately as possible,”* said HRH Princess Chulabhorn.

Thailand’s strategy is built on key areas that encompass all aspects of rabies control, elimination and prevention. It includes disease monitoring, prevention and control in animals and human beings; animal shelter management and integration of human-animal disease control in communities; awareness, data collection, analysis and research through its “Rabies One Data” centre; project monitoring and evaluation; and research, development and transfer of technology. *“Her Royal Highness is championing a One Health approach to eliminate rabies in both Thailand and in the South-East Asia Region,”* said Dr Bernadette Abela-Ridder, Team Leader of WHO’s Neglected Zoonotic Diseases unit. *“This will greatly contribute to reaching our global target of zero human rabies deaths by 2030.”*

#### *Role model*

Today, Thailand leads South-East Asia and the world in developing and implementing novel disease control strategies such as cost- and dose-saving intradermal vaccines. It is therefore crucial that access to such treatment is made available in endemic regions, particularly among poor and rural populations. *“Our most important next step is to get post-exposure prophylaxis out to the village level where it is most needed and where we could save thousands of lives,”* said Dr H. Wilde, Chulalongkorn University, Bangkok, Thailand. *“As the Princess pointed out, our challenge is to figure out how to sustainably vaccinate 70% of all dogs in these settings to break the cycle of dog-to-human rabies transmission.”* WHO looks forward to working with HRH Princess Chulabhorn to further advocate for an end to rabies, as the world

unites to achieve its goal of zero human rabies deaths by 2030. Rabies can be used as an indicator of success for the One Health approach as it combines efforts by human and veterinary health sectors. *“I care for the health of people as much as I am concerned about the humane treatment of dogs. So if you want me to help you with rabies elimination, I can help you anywhere and in other countries. I am very willing,”* said HRH Princess Chulabhorn.

Rabies, a fatal but vaccine preventable zoonotic disease, predominantly affects poor and rural populations in Africa and Asia. It is transmitted via bites and scratches from infected animals; dogs are responsible for around 99% of human cases. Preventing human rabies deaths requires an effective One Health approach, namely dog vaccination to stop disease transmission at its source, and available, affordable PEP for people who are exposed.

*HRH Professor Dr HRH Princess Chulabhorn Mahidol*

Princess Chulabhorn is the youngest daughter of Their Majesties King Bhumibol Adulyadej and Queen Sirikit of Thailand. She is the founding President of the Chulabhorn Research Institute, which directs various national research projects in Thailand, including a rabies eradication programme, with a special project for accelerated immunization. Her Royal Highness studied chemistry and in 1979 graduated from the Faculty of Science at Kasetsart University with a First Class Honours Bachelor of Science degree. She continued to study science at Mahidol University, where in 1985 she received her doctorate. In 1986 she was awarded the UNESCO Albert Einstein Medal for her efforts in promoting scientific collaboration and became the first Asian to be invited to join the Royal Society of Chemistry in the United Kingdom as an Honorary Fellow. Since 1985 she has been a Professor of Chemistry at Mahidol University and a visiting lecturer in some of the world’s best known universities. For further Information Contact: Ashok Moloo, WHO/HTM/NTD; Telephone: +41 22 791 16 37; Mobile phone: +41 79 540 50 86; [molooa@who.int@ntdworld](mailto:molooa@who.int@ntdworld)

#### **8.4: WVA & WMA Call for Elimination of Dog-Transmitted Rabies by 2030**

The total elimination of dog-transmitted human rabies by 2030 has been called for in a joint statement by the World Veterinary Association (WVA) and World Medical Association (WMA). The two organisations have joined forces to mark World Rabies Day on September 28 in collaboration with the “Rabies: Zero by 30” campaign of Global Alliance for Rabies Control (GARC). Rabies claims the lives of an estimated 60,000 people each year, mainly affecting poorer people and children between the ages of five and 15. About 97 per cent of these deaths can be attributed to bites from dogs. But notifications and reporting of animal bites are generally not required in the countries in which these bites occur most commonly, leading to unreliable data on animal bites. The WVA and WMA say that the global and endemic nature of rabies can also be attributed to a general lack of awareness of preventive measures, such as wound washing after bites occur, poor knowledge of proper post-exposure

prophylaxis (PEP) through vaccination, lack of administration of immunoglobulins, and an irregular supply of anti-rabies vaccine and immunoglobulin, particularly in primary healthcare facilities. Lack of affordability of vaccines and immunoglobulin is also a contributing factor. International and national vaccine manufacturers produce enough vaccine annually to deliver approximately 28 million rabies human PEP treatments in dog rabies-enzootic countries of Africa, Asia, and the Eastern Mediterranean region, preventing nearly 98 per cent of human rabies deaths. Unfortunately, easier access to rabies vaccine, particularly in urban centres of Africa and Asia, has been accompanied by an increasing proportion of PEP (up to 70 per cent) being administered to people who are not at high risk of developing rabies. WVA President, Dr Johnson Chiang said: 'Rabies control is a multidisciplinary and multidimensional activity. Participation and effective intersectoral cooperation among medical and veterinary professionals from government and academic institutions, civic and local bodies, national and international nongovernmental organizations, and animal welfare organizations is essential'. WMA President, Dr Ketan Desai added: 'If dog-transmitted rabies is to be eliminated, strengthening legislation concerning pet ownership, reducing the population of stray and unowned free-roaming dogs, broadly implementing dog vaccination programs, and provision of early rabies diagnostic facilities and adequate post-exposure health care are prerequisites. Dog-transmitted rabies elimination is an ideal opportunity to move the 'One Health' concept forward'. WVA and WMA is inviting organizations to become part of the End Rabies Now campaign, to end deaths due to rabies by 2030. ([www.worldvet.org](http://www.worldvet.org) [www.wma.net](http://www.wma.net) WVA and WMA Joint Press release)

### **8.5: 17th Indian Veterinary Congress & XXIV Annual Conference of IAAVR held at IVRI**

The 17th Indian Veterinary Congress, XXIV Annual Conference of Indian Association for Advancement of Veterinary Research (IAAVR) and National Symposium on "New Generation Vaccines, Diagnostics for Improvement of Animal Health & Productivity vis-a-vis Genomic Interventions for the Societal Benefit" was organized at ICAR-Indian Veterinary Research Institute, Izatnagar, during 8th-9th April, 2017. Over 350 delegates from all over the country participated in the Congress, which was inaugurated by Dr Trilochan Mohapatra, Secretary DARE and DG, ICAR. Dr Manmohan Singh, Special Chief Secretary, Govt. of Andhra Pradesh was the Guest of Honor, while Dr R.K. Singh, Director and Vice Chancellor, IVRI, Izatnagar, presided over the inaugural function. Dr B.P. Mishra, Joint Director (Res), IVRI, Izatnagar and Dr S.N. Singh, President, Dr Rishendra Verma, Founder Secretary & Organizing Secretary were on the dais.

Other participants in the deliberations included a large number of eminent scientists belonging to past & present cadres of National Institute of Virology, Pune, IVRI, ICAR, SBPUAT, Meerut, SKUSAT, Jammu, GPAUA&T, Pantnagar, OIE, France, NBAGR, Karnal, NCDC, New Delhi, NRC on Mithun,



Nagaland, CARI, College of Veterinary Science, Bhubaneswar, FSSAI, New Delhi, PGIMER, Chandigarh, MGIMS, Wardha, ICMR HQ, New Delhi, and some non-Governmental and private companies.

### **8.6: Veterinary Education at Private Veterinary Colleges gets a boost in Rajasthan: ACVM and others getting functional again.**

According to posts on social media and local media news reports, at least three private veterinary colleges in Rajasthan (at Jaipur (ACVM), Sikar and Chomu) have been approved by the Government of India to commence admission of students for B.V.Sc & A.H. degree to be awarded by RAJUVAS, Bikaner. Most of the senior veterinary educationists in India regard this as a good step that was necessary to expand and strengthen veterinary education in the country to meet the rising demand for veterinarians. Each of these colleges is in the process of admitting 80 students in the current academic year. *We have learnt that counseling of students for Apollo College of Veterinary Medicine (ACVM), Jaipur, has already been completed.*

It may be recalled that ACVM was the first private veterinary college of the country which was started in 2003 as a result of initiative of two enterprising practicing veterinarians of Indian origin from USA (Dr. Raj Khare and Dr. Srinivasan Ramanathan) for whom it was a dream project to repay their motherland. Their dream came true when the first batch passed out in 2009. However, after some ugly instances of disruption, including a court case and strike by students following non-recognition of the college by VCI, the college remained closed for several years. The existing students were later moved to the College in Bikaner.

During the process of the college becoming functional again, Dr. Raj Khare, Founder President & Trustee Apollo College of Veterinary Medicine, Jaipur, India, in a note released from his U.S. address (1728 West Cheltenham Ave. Philadelphia, Pa. 19126 USA) has thanked the Prime Ministers Office, Govt. of India Animal Husbandry Department, and Veterinary Council of India, for granting permission to admit the students for the 2017-18 academic year.

### **8.7: European Doctors and Veterinarians jointly celebrate One Health Day**

The Federation of Veterinarians of Europe (FVE) and the Standing Committee of European Doctors (CPME) have come together to collaborate and to jointly act in recognition of the concept of "One Health". At the special occasion of the first celebration of the "One Health Day 2016", Veterinarians and Doctors put forward the One Health concept across to future health professionals. The "One Health" approach aims to expand interdisciplinary collaborations and communications in all aspects of healthcare for humans, animals and the environment

### **8.8: Dr. M.P. Agarwal publishes his memoirs in Hindi**

Dr. M.P. Agarwal, Former Emeritus Scientist (ICAR), and Former Dean, Veterinary College, Jabalpur, writes to inform about the recent publication of his memoir in Hindi and titled **“Ye Hain Hamare Krishi Vishwa Vidyalaya”** (Our Agricultural Universities). The first part of the book, is about his childhood and his joining Jabalpur Veterinary College, which later became a part of an Agricultural University. In the second part of the book, he has analyzed his experiences on some of the major issues related to the Agricultural Universities established in India from 1960 onwards. Dr Mahesh Chandra Agarwal has evaluated the past achievements and failures of the Agriculture Universities (particularly their veterinary faculties) of these universities in his memoirs. The book was published in August 2017 by Blue Rose Publishers, New Delhi. It is also available on Amazon.in and will also be registered with Flipcart, shortly. Its link: <http://blurosepublishers.com/product/ye-hai-hamare-krishi-vishwa-vidyalaya/http://amzn.in/5efCl62>. The price of the hard copy of the book is Rs. 600/-, but the young generation may use e-book format on Kindle costing only Rs. 300/-. Author's Contact: [drmcagrawal@gmail.com](mailto:drmcagrawal@gmail.com)

## **9. SCIENCE, HEALTH & SOCIETY**

### **9.1: Public Health: Press Clippings**

1. Birds use cigarettes to shoo away parasites: Scientists in Mexico have found compelling evidence that birds in cities are incorporating cigarette ends in to their nests to ward off parasites. The nicotine which gets deposited in cigarette filter tips through smoking, is known to be a powerful natural insecticide. This deliberate action of the birds is thought to be keeping harmful parasites at bay. Ecto-parasites such as mites, lice, ticks and fleas are known to affect birds, especially nestlings, adversely. (TOI, December 9, 2012).
2. Eating half-cooked chicken can lead to paralysis: A common bacterium found in improperly cooked chicken can cause Guillain-Barre Syndrome (GBS) - the leading cause of acute neuromuscular paralysis, researchers have found for the first time. Researchers said if chicken was not cooked to the proper minimum internal temperature, the bacterium *Campylobacter jejuni* could still exist. "It takes a certain genetic makeup combined with a certain *Campylobacter* strain to cause the disease," said Linda Mansfield from Michigan State University. GBS is the world's leading cause of acute neuromuscular paralysis in humans. Those suffering from GBS can initially experience vomiting and diarrhoea. One to three weeks later, they begin to develop weakness and tingling in the feet and legs. Gradually, paralysis can spread to the upper body and arms, and even respiration may be laboured. (TOI, December 12, 2016).
3. Man left fighting for life after dog licks scratch: A 51 year-old man in UK was left fighting for his life and caught a deadly skin infection with

red tennis-ball sized blisters after his pet dog licked him. David Morey, a former soldier, was in hospital for five months, suffered double kidney failure and now needs dialysis every other day. The former paratrooper's brush with death was caused by one of the several microbes found in dog's mouth and saliva. Experts think that the dog lover caught the infection from one licking a small scratch on his skin. Animal mouths are hosts to enormous oral microbiom of bacteria, viruses and yeast, some of which are pathogenic to man. (TOI, December 13, 2016).

4. AIIMS team claims Kala - Azar breakthrough: Visceral leishmaniasis ( VL ) in India appeared to be anthroponotic (without an animal reservoir ),person to person transmission taking place by means of sand fly vector bite, unlike Europe and South America where dogs are the principal source of human infection. Although endemicity in eastern India was often related to livestock density and cattle had been suspected as possible reservoirs. Now Dr. Sarman Singh and his team of researchers have successfully isolated the kala-azar parasite from goat blood, thereby providing evidence that VL in India can also be zoonotic. (TOI, January 21, 2017).
5. Ticks invade Poland police station, bite 27 officers: Officials said that 27 Polish police officers have been hurt - not in any engagement with criminals, but by ticks that had invaded their police station. The ticks were carried by pigeons that nested on ledges outside the windows of the headquarters in Poznan, a city in western Poland. Fire-fighters are using special equipment to disinfect filthy window ledges covered in pigeon droppings. Such sightings of Argas sp. ticks from pigeons' roosting places on window ledges and wandering in to human dwellings have been known in India also. (TOI, April 27, 2017).
6. Plant therapy could cure drug-resistant malaria: Study: In a first, a malaria therapy made from the dried leaves of an Asian plant has successfully cured 18 critically ill patients. The findings may help fight the growing problem of drug-resistant malaria. A physician in the Democratic Republic of Congo opted for the therapy from the dried leaves of Artemisia annua plant (sweet wormwood ),when other medications failed. The patients were first given artemisinin-based combination therapy (ACT), which blends artemisinin, an extract from Artemisia annua, mixed with other drugs. But the patients, ranging in age from 14 months to 60 years, lapsed into severe malaria, with symptoms including loss of respiratory distress and convulsions. A five-year-old patient became comatose. They were then treated with intra-venous artesunate, the frontline medication for severe malaria, but in vain. Finally, they turned to dried leaf Artemisia, developed by Worcestor Polytechnic Institute in the US. In five days, all patients recovered. "They were dying. So to see 100% recovery was amazing". (TOI, April 28, 2017).
7. Sushi can be a health hazard due to parasites: Sushi lovers are being warned of the dangers of ingesting parasites from raw and undercooked

fish, a study revealed. The study published in the British Medical Journal Case Reports said sushi's popularity in the West could be linked to a rise in parasitic infections, the BBC reported. The study followed the case of a 32-year-old man in Lisbon, who was found to have parasite larvae on his gut lining. He had been suffering stomach pain, vomiting and fever for a week. A blood test showed mild inflammation and the area below his ribs was found to be tender. But it was only when the man said he had eaten sushi that doctors suspected he might have anisakiasis. Anisakiasis is a parasitic disease caused by anisakid nematodes that can invade the stomach wall of humans. They added that most cases of anisakiasis had been reported in Japan. (TOI, May 13, 2017).

8. 6-inch worm was making baby's liver malfunction: Doctors at Delhi's GB Pant Hospital recently removed a 6-inch long roundworm from the liver of an 18-month-old infant. Roundworms (*Ascaris lumbricoides*) are parasites which arise from ingestion of contaminated food and water. Commonly, they lodge in the intestine but can migrate to other organs as aberrant parasites. This was a rare case in which the parasite managed to travel to the liver via bile duct of the baby boy of very young age. The worm was detected by endoscopy and had to be pulled out by surgery. The child had been in incessant pain for the past one and a half months. During this period he used to pass worms in stools and vomit, but there was no respite. Doctors said roundworm infestation is common in urban slums where sanitation is not proper and children often consume contaminated food and water. (TOI, May 16, 2017).
9. A tick whose bite makes victims allergic to meat is spreading. The Lone Star tick carries a sugar molecule called Alpha-Gal which reprograms people's immune systems, rendering them allergic to meat. When bitten by the tick, the body's first response is to develop an antibody. Once this happens, every time you consume the sugar molecule, which is present in red meat, your immune system will attempt to fight it off, triggering an allergic reaction. Symptoms include hives, shortness of breath, stomach cramps and difficulty in breathing and fainting. In the rarest of cases, it can even cause death. (TOI, June 26, 2017)
10. Cows have a "remarkable" ability to fight HIV: Cows have a "remarkable" ability to fight HIV, according to a new study that researchers say could help develop a vaccine for humans. The animals' powerful immune systems rapidly produce special antibodies that neutralise the virus. Only 10-20% of humans with HIV naturally develop the "broadly neutralising antibodies" (bNAbs) and those who do, only begin generating them about two years after infection, by which time the virus has mutated. (Contributor: Dr. M.B. Chhabra, is an eminent Veterinary Academician)

## **9.2: Why Black Pepper is called the “King of All Health Spices”**

Black pepper is claimed to help in lightening up your mood, getting relief from a sore throat or cough, and in losing weight. It is also an effective weapon against cancer and can do so much more for your health.

Ground black pepper is a very flavorful spice that adds a unique taste to many foods, but best of all, you can feel happier eating it regularly. Here are some of the benefits of pepper:

**Drives away depression—**Pepper is a natural antidepressant. The compound piperine in pepper increases cognitive brain function, beats depression and helps the brain function properly.

**Ensures better nutrition—**Pepper helps the body absorb nutrients quickly. It also enables drugs to function more effectively.

**Improves anorexia—**Pepper can naturally stimulate appetite and improve digestion. So, a dash of pepper in the soup can make an anorexic go through an entire meal all the way to the dessert!

**Effective cough relief—**The antibacterial properties of pepper make it a great natural remedy for a sore throat, cough and even congestion relief.

**Great for skin and hair—**Pepper consumed regularly can make the skin clear and also treat dandruff effectively when applied on the scalp.

**Helps lose weight—**Add some pepper to your diet if you're planning to lose weight. Pepper causes breakdown of fat cells and gets rid of excess water and toxins in the body.

**Prevents cancer—**This amazing spice is full of antioxidants and is known to prevent certain types of cancer. (Source: Internet - by [Julissa Clay](#) | Sep 9, 2017)

## **9.3: The sweet way to heal your wounds**

For years now, sugar's been a dirty word. It's been blamed for everything from obesity, heart disease and diabetes to tooth decay and acne. But there's something they don't know. Sugar's better for you than all those artificial sweeteners and substitutes out there today... especially the ones you'll find in so-called "diet" products. In one study of nearly 2,600 people, those who drank diet sodas had a 47% higher body mass index (BMI) than those who didn't, and their risk of obesity was doubled\*. I'm always suspicious of things that aren't natural.

But there's another reason you should keep sugar on your shelf.

Did you know that sugar can heal your cuts, scrapes, burns and even large wounds without leaving a scar? It kills germs and repairs tissue better than any antiseptic or disinfectant on the market.\*\*

Long before all these Johnny-Come-Lately naysayers started telling you how bad it was for you, sugar was valued as an antiseptic. For more than 4,000 years, since ancient Egyptian times, people have known about sugar's miraculous properties. But it fell out of favor once antibiotics became available. Makes you wonder if the high price and incredibly high profit margins had anything to do with that.

*\*Fowler, S., Williams, K., et al, "Fueling the Obesity Epidemic? Artificially Sweetened Beverage Use and Long-term Weight Gain," Obesity 2008;168 :1894-1900; \*\*Archer, H.G., et al, "A controlled model of moist wound healing: comparison between semi-permeable film, antiseptics and sugar paste," J. Exp. Pathol. (Oxford) April 1990; 71(2): 155-70*

Al Sears, MD <[alsearsmd@send.alsearsmd.com](mailto:alsearsmd@send.alsearsmd.com)>

#### **9.4: Mainstream doctors are quick to prescribe drugs to bring high blood pressure down.**

They may put you on one, two or even three of Big Pharma's drugs. They include diuretics, beta-blockers, and calcium channel blockers.

These drugs have serious side effects. I'm talking about things like edema, dizziness, nose bleeds, rash and hearing loss. They can lead to cardiac failure, heart attack, depression, colitis, and arthritis pain.

It's bad enough risking those side effects if you have to. But your doctor may be giving you these pills for NO good reason. You might not have high blood pressure at all. Let me explain...

Hypertension means your blood pressure measures more than 140/90 mmHg. The first number is the *systolic* pressure. It measures the pressure in your blood vessels while your heart is contracting. The second number is *diastolic* pressure. It measures the pressure in your arteries between heartbeats when your heart is relaxed.

But how accurate is your doctor's measure of that pressure?

In a report from Kaiser Permanente, a 72-year-old woman was told by her doctor's office that her pressure measured 150/70 mmHg. She had no history of high blood pressure. Researchers found that the doctor's staff made multiple mistakes in taking her blood pressure. Her real pressure was closer to a healthy 128/64 mmHg. But based on her office reading her doctor might have given her a wrong diagnosis. And she might have been given unneeded drugs.<sup>1</sup>

We've been using the same method to measure blood pressure for over a hundred years. A cuff measures blood pressure in your arm. But it's much more accurate to measure what is called "central aortic blood pressure (CABP)." It measures pressure right at your aorta. But that can only be done with an invasive procedure.

A major study in the *Journal of the American College of Cardiology* compared these two measures. It used data from over 2,500 people. It compared their arm cuff readings with CABP.

The results found that cuffs were reasonably accurate in people who had blood pressure lower than 120/80 or higher than 160/100. But for everyone else — most people — the accuracy of the cuff dropped dramatically to as low as 50%.<sup>2</sup> And your home BP machine is no more reliable. A recent study found that up to 32% of readings from these machines can be off by more than 5 points.

Most inaccuracies in blood pressure measures come from human error. Nurses, health aides and even doctors are often rushed and take shortcuts. They don't follow the rules for taking a proper blood pressure reading.

A brand new study in the *Journal of the American Heart Association* proved it. It shows when proper guidelines are followed; systolic readings can drop on

average 12.7 mmHg. But they can swing as much as 46 points lower or 20 points higher compared to the reading you get in most doctors' offices.

And following the guidelines can drop diastolic readings by an average of 12.0 mmHg. But diastolic readings can swing as much as 34 points lower to 10 points higher than in your doctor's office.<sup>3</sup>

In other words, the blood pressure readings you are getting are probably not very accurate. When anyone takes your pressure make sure they follow these guidelines.

### **Blood Pressure Guidelines**

When getting your blood pressure taken you should:

1. Be sitting upright in a chair with a back support
2. Have your feet planted on the floor
3. Have an empty bladder
4. Sit quietly for 3 to 5 minutes before starting
5. Keep your legs uncrossed for at least five minutes before starting
6. Be wearing no restrictive clothing
7. Eliminate caffeine, exercise, and tobacco for at least 30 minutes prior to testing
8. Use a special wide cuff if your arm is fat or very muscular
9. Place the cuff on your bare arm, not over clothing.
10. Place the cuff one inch above the bend in the elbow
11. Keep the cuff level with your heart, with your arm supported on a table or other surface

(Source: Al Sears, MD, CNS; References 1 Handler J. The Importance of Accurate Blood Pressure Measurement. *The Permanente Journal*. 2009. 2 Picone DS., et al. "Accuracy of Cuff-Measured Blood Pressure." *Journal of the American College of Cardiology*. 2017. 3 Agarwal R. "Implications of Blood Pressure Measurement Technique for Implementation of Systolic Blood Pressure Intervention Trial (SPRINT)." *Journal of the American Heart Association*. 2017.

## **9.5: Toxins that make your dog sick**

Quite a number of people are aware of the fact that exposure to household toxins such as asbestos can cause mesothelioma in humans. Pets are even more susceptible to such dangers. This increased danger, is because pets are smaller and are closer to garage [floors](#), lawns and carpets that may harbor residue of pesticides and chemicals. Since they are naturally curious and are not aware of toxic dangers around them, pests are more likely to come across substances that are harmful to their health. Most pet owners try their best to make sure their pets are safe. However, there are hidden health risks that they do not pay attention to. Here are some unseen household cleanliness issues that can impact negatively on your pet's health.

### **Household Cleaners**

Cleaning products with ingredients like chlorine, bleach and ammonia can put your pets at a risk of developing cancer, kidney damage and anemia. These

toxic cleaners still pose health risks even when they are closed and put away since they leave behind harmful vapors. Ammonia vapors from [commercial cleaners](#) are irritating to the skin. Chlorine is a poisonous breathing nuisance and can cause a serious damage to the skin, eyes and other membranes of your pet. It is a common ingredient in multipurpose cleaners, disinfecting wipes, mildew removers, tile scrubs and laundry detergents. Chlorine is denser than air and settles in low-lying areas where pets normally stay. Cleaning products with ingredients like chlorine, bleach and ammonia can put your pets at a risk of developing cancer, kidney damage and anemia. These toxic cleaners still pose health risks even when they are closed and put away since they leave behind harmful vapors. Ammonia vapors from [commercial cleaners](#) are irritating to the skin. Chlorine is a poisonous breathing nuisance and can cause a serious damage to the skin, eyes and other membranes of your pet. It is a common ingredient in multipurpose cleaners, disinfecting wipes, mildew removers, tile scrubs and laundry detergents. Chlorine is denser than air and settles in low-lying areas where pets normally stay.

Laundry detergents that remain on clothes and pet blankets also pose health risks to your pet. If your pet has a habit of drinking from the toilet bowl, there is a likelihood of it ingesting even the toilet bowl cleaners, so training your pets to stay away from areas you naturally use extra care when cleaning is more important because of the risk posed by the cleaners before you even think about any hygiene issues.

### **Household Garbage**

Household garbage remains to be the leading health risk to pets. Animals get attracted to the smelly refuse from such garbage. Dogs often like picking through the trash in search of anything that smells good. This is an awful hazard since garbage cans have a variety of household refuse such as poisonous batteries, medications and paper towels used for cleaning.

Broken glass, stay from [dirty window panes](#), can be dangerous to your pet's tongue or gums. If swallowed, broken glass can cause horrible damage to the stomach or esophagus.

### **Antifreeze**

Most antifreeze formulations that people use today are made of ethylene glycerol as the main ingredient. Animals are drawn to the sweet smell of ethylene glycerol. Consumption of ethylene glycerol leads to deadly side effects. A half of teaspoon of spilled antifreeze is enough to kill an average-sized cat. If you do not realize it early enough, the ethylene glycerol can cause irreversible damage to the kidneys of your pet.

### **Formaldehyde**

Formaldehyde exists in most of the new furnishings and household cleaners in your home. It is also present in construction materials. It is a toxic substance and can cause health concerns if inhaled or penetrates through the skin. According to US Environmental Protection Agency, formaldehyde can cause cancer to animals.



## Conclusion

Anything that poses health risk to people does the same to animals as well. These hazards you normally overlook can lead to silent but deadly illnesses in pets. Particularly inhaled toxins can cause cancer, respiratory difficulties and circulatory disorders in animals. Bear in mind that there are lots of environmentally friendly cleaning products available, that are highly effective, and won't have the same impact on your pets. Consider using powerful, natural cleaners, such as vinegar and baking soda, in favor of abrasive chlorine based cleaners, for example, and you can go a long way to improving the conditions in your home for your beloved pets.

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### 9.6: FDA does not approve 'Experimental' Therapy for Cancer

In 2015, a 27-year-old singer from upstate New York was diagnosed with deadly stage 4 mouth cancer. Four years ago, a university student in London collapsed following the worst headache of his life. A trip to the hospital revealed he had a stage 3 brain tumor. Today, both of them are *cancer-free* after undergoing an "experimental" therapy... A therapy the FDA has tried to crush for over 70 years.

Both these patients refused traditional cancer treatments like radiation and chemotherapy. Instead, they chose to undergo hyperbaric oxygen therapy (HBOT). Hyperbaric oxygen therapy is one of the most powerful tools we have in the fight against cancer. But it's controversial. HBOT attracts attention from the government because it works. And anything that kills cancer naturally is going to bring heat from Big Pharma and our Federal government. But in other parts of the world — like Germany, Italy and Cuba — oxygen therapy is used often to treat issues as many as 74 different conditions and diseases. Including cancer... And still, the FDA stubbornly refuses to approve the treatment.

But HBOT isn't the only cancer therapy the FDA wants to banish. There's another cancer treatment which is illegal. This therapy can penetrate cancer tumors and cause them to self-destruct— without damaging healthy cells. My friends at The Institute for Natural Healing have been researching this illegal breakthrough that works on the toughest cancers.

(Al Sears, MD, 11905 Southern Blvd., Royal Palm Beach, FL 33411, USA)

## 10. FORTHCOMING EVENTS

### Calendar of Conferences, Conventions and Symposia in India and abroad

Get your event listed in this section by mailing complete details to the Editor: [rnkohli@gmail.com](mailto:rnkohli@gmail.com)

#### 10.1: Veterinary Workshop on 'Handling and Care of Laboratory Animals'; October 24-27, 2017, Manesar, Gurugram

VENUE: NBRC (National Brain Research Centre), Manesar, Gurugram.

For details & Registration: [www.nbrc.ac.in](http://www.nbrc.ac.in); Convener, Dr. Inderjeet Yadav,  
Veterinarian In-Charge Animal Facility < Email: [inderjeet.nbrc@gov.in](mailto:inderjeet.nbrc@gov.in).

10.2: IDF Word Dairy Summit **29<sup>th</sup> Oct. to 3<sup>rd</sup> Nov. 2017, Belfast, United Kingdom**. For Details: [www.idfwds2017.com](http://www.idfwds2017.com); [info@idfwds2017.com](mailto:info@idfwds2017.com)

10.3: National Seminar on Food Adequacy & Climate Change and AMST Conference, **3-4, November 2017, Pattikkad, Thrissur, Kerala**. For Details: Dr. B. Sunil, Ph. 9497626575; Email: [amstoonkerala@gmail.com](mailto:amstoonkerala@gmail.com)

10.4: 16<sup>th</sup> NAVS (I) Convocation-cum-Scientific Convention, **4-5 November, 2017, Tirupati, A.P.** Conference theme: 'Advancement in Veterinary Sciences: Impact on Enhancing Farmers Income'. For details contact: Dr. T.S. Chandrasekhara Rao, Dean, Faculty of Veterinary Science, Sri Venkateswara Veterinary University, Tirupati - 517 502; Cell: 09989051543, 9440076619; Ph: 0877-2249787 Fax: 0877- 2249786 and email ID:([dvsc\\_svvutpt@yahoo.co.in](mailto:dvsc_svvutpt@yahoo.co.in))

10.5: 19th Organic World Congress **7-8 November 2017, New Delhi** and a Pre-Conference on **7-8 November 2017**, Ghaziabad as 3rd Organic Animal Husbandry Conference. For details and to view the conference brochure: <https://drive.google.com/file/d/0B0TX5SvS4IMRNkYwUUlqZW1sRkE/view>

10.6: Southern European Veterinary Conference (SEVC) and Congreso Nacional de AVEPA, **9-11 November, 2017, Barcelona, Spain** (International veterinary News Service)

10.7: 41<sup>st</sup> ISVS Annual Congress & National Symposium on 'New Horizons in Cancer Research pertaining to effects on Health, Production and Reproduction in Animals', on **14<sup>th</sup> to 16<sup>th</sup> December 2017**, at College of Veterinary Sciences, Sri Venkateswara Veterinary University, **Tirupati, A.P.** Contact: Organizing Secretary Dr. R.V. Suresh Kumar: Ph. 9849202540; Fax: 0877 22 49563; Email: [isvstpt2017@gmail.com](mailto:isvstpt2017@gmail.com); [www.svvu.edu](http://www.svvu.edu) or [www.isvs.in](http://www.isvs.in).

10.8: XXXI Annual Conference of IAVMI & National Symposium on 'Innovations in Animal Health- Current Challenges and Future Prospective', **January 29-31, 2018** at Sri Venkateswara Veterinary University, **Tirupati - 517 502, AP**. Organized by: Indian Association of Veterinary Microbiology, Immunology and Specialists in Infectious Diseases (IAVMI). Contact for details: Dr. Ashok K. Tiwari; Email: [aktiwari71d@gmail.com](mailto:aktiwari71d@gmail.com)

10.9: 46<sup>th</sup> Dairy Industry Conference, **Feb. 8<sup>th</sup> - 10<sup>th</sup> at Kochi, Kerala**. Venue: Adlux International Convention and Exhibition centre. For further details visit: [www.46dic.com](http://www.46dic.com); Email: [info@46dic.com](mailto:info@46dic.com)

10.10\_: Global Experts Meeting on Infectious Diseases, **August 13-14, 2018, Tokyo, Japan.**

Meeting International has announced Global Experts Meeting on Infectious Diseases, to be held during August 13-14, 2018 Tokyo, Japan, to share and explore their research findings as keynote presentations, Oral talks, Poster Presentations, Workshops, and Exhibitions. Details: MeetingInternational.



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