



July 2019

[www.navsindia.org](http://www.navsindia.org)

# 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**

**JULY, 2019**

The NAVS Newsletter is an Open Access Non-Commercial e-publication for private circulation to all those who are associated with the Academy, as well as to related Veterinary and allied institutions, officials and organizations, and other interested professionals.

It permits non-commercial reproduction of its contents to publications of similar readership in any medium, provided NAVS Newsletter is properly cited.

**CONTENTS**

Ch.1. NAVS General Information .....3  
Ch. 2. From the President’s Desk..... 6  
Ch. 3. Editor’s Note..... 8  
Ch. 4. Letters to the Editor.....:.....14  
Ch.5. NAVS News.....16  
Ch.6. Vet Track: Appointments, Transfers, Promotions and Felicitations..... 20  
Ch.7. View Point: Rama Kumar V: Filmless X-Ray..... 22  
Ch.8. National & International Veterinary News .....24  
Ch.9. Dairy News.....31  
Ch.10. Science, Health & Society.....37  
Ch.11. Forthcoming Events (Calendar of Conferences, Conventions and  
Symposia in India and abroad) .....42

**Cover design assistance: Mr. Narendra Pandey**

**Editor Dr. R.N. Kohli**

*All correspondence regarding the Newsletter may kindly be addressed to the Editor:*

**Email: [rnkohli@gmail.com](mailto:rnkohli@gmail.com);**

**Editor’s Postal Address: 922, Sector- A (B&C), Vasant Kunj, New Delhi- 110070**

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

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

**[www.navsindia.org](http://www.navsindia.org)**

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

### **1.1: Governing Council (2017- 2019)**

#### **Office Bearers**



**President**  
Maj Gen Shri Kant, SM, VSM (Retd)  
Former Vice-Chancellor  
LUVAS, Hisar 125 004, Haryana  
Cell : 09416314967  
E-mail : [shrikant28@hotmail.com](mailto:shrikant28@hotmail.com)



**Vice-President**  
Dr. D.V.R. Prakasha Rao  
Chairman and Managing Director  
Prakash Food & Feed Mills (P) Ltd, Chennai  
Cell : 09940099000  
E-mail : [contact@prakashfeeds.com](mailto:contact@prakashfeeds.com)



**Secretary General**  
Dr. S.K. Gupta  
Ex-Dean, COVS, LUVAS  
206, Defence Colony, Hisar - 125 001  
Cell : 09896068399  
E-mail : [drsuringupta@gmail.com](mailto:drsuringupta@gmail.com)



**Treasurer**  
Dr. Nem Singh  
SKE-218, Shipra Krishna Vista  
Plot 14, Ahimsa Khand  
Indrapuram, Gaziabad - 201 014 (U.P)  
Cell : 09818244710  
E-mail : [singhnem1945@gmail.com](mailto:singhnem1945@gmail.com)



**Editor**  
Dr. R.N. Kohli  
922, Sector - A, Pocket - B&C,  
Vasant Kunj,  
New Delhi - 110070  
Cell: 09968920200  
E-mail: [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)  
Dr. Minakshi Prasad, Hisar: [minakshi.abt@gmail.com](mailto:minakshi.abt@gmail.com)  
Dr. S.K. Srivastava, Izatnagar: [sksrivastava1093@gmail.com](mailto:sksrivastava1093@gmail.com)  
Maj. Gen. Dr. M. L. Sharma, Delhi: [sharmaml@thebrookeindia.org](mailto:sharmaml@thebrookeindia.org)  
Dr. Ravindra Sharma, Hisar: [rsharma698@gmail.com](mailto:rsharma698@gmail.com)  
Dr. V.D.P. Rao, Vijaywada: [raovdp@rediffmail.com](mailto:raovdp@rediffmail.com)  
Col. Dr. R. P. Garg, VSM, NCR, Noida, U.P.: email ID not available  
Dr. S.N. Singh, Bangalore: [snsingh.2006@gmail.com](mailto:snsingh.2006@gmail.com)  
Dr. S.K. Saha, Izatnagar: [subodhksaha@yahoo.com](mailto:subodhksaha@yahoo.com)  
Dr. A.B. Mandal, Izatnagar: [drab.mandal@gmail.com](mailto:drab.mandal@gmail.com)  
Dr. S.S. Randhawa, Ludhiana: [sarnarinder@gmail.com](mailto:sarnarinder@gmail.com)  
Dr. Mandeep Sharma, Palampur: [mandeepsharma289@hotmail.com](mailto:mandeepsharma289@hotmail.com)  
Dr. P. N. Khanna, Delhi: [pran\\_khanna@rediffmail.com](mailto:pran_khanna@rediffmail.com)  
Dr. S. K. Tiwari, Durg: [drtiwarisurgery@gmail.com](mailto:drtiwarisurgery@gmail.com)

## **MEMBERS (PERMANENT EX-OFFICIO)**

Incumbents holding following Official Govt. of India Positions are permanent Ex-Officio members: DG RVS; *DDG (A.S.), ICAR; AHC (GOI); and President VCI*

## **1.2: INSTITUTIONAL/CORPORATE LIFE MEMBERS**

### **INSTITUTIONAL LIFE MEMBERS**

LUVAS (Lala Lajpat Rai University of Veterinary & Animal Sciences), Hisar, Haryana.  
CKVU (Chattisgarh Kamdhenu Veterinary University), Raipur / Durg, Chattisgarh.  
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  
Sri Venkateshwara Veterinary University, Tirupati, A.P.  
Kamdhenu University, Gandhinagar-382010, Gujrat  
Bihar Animal Sciences University, Patna (Bihar)  
Karnataka Animal, Fishery & Veterinary Sciences University (KAFVSU), Nandinagar, Bidar (Karnataka)

### **CORPORATE LIFE MEMBERS**

M/S Indian Herbs, Saharanpur  
M/S Ayurved Limited

### **1.3: 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 Present Date (Founder Editor);

---

\* Since deceased

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



National Academy of Veterinary Sciences (I) welcomes formation of a separate Ministry of Fisheries, Animal Husbandry and Dairying by newly formed NDA government under the dynamic vision of Sh. Narendra Damodar Modi Ji, our Hon'ble Prime Minister. This is a landmark move for the country's Animal Husbandry, Dairying and Fisheries sector. I on behalf of self and the Governing Council of NAVS (I) convey our sincere thanks to the Hon'ble PM for this bold and long awaited decision.

I along with Dr. DVR Prakash Rao, Vice-President of the Academy, Dr. Nem Singh, Treasurer and Dr. Ravindera Sharma, GC Member of the Academy and Dr. Azad Kaushik Professor, Guelph University Canada met Sh. Giriraj Singh Ji, the Hon'ble Minister and Dr. Sanjeev Kumar Balyan Ji, Hon'ble MoS, Ministry of Fisheries, Animal Husbandry and Dairying on 11 June 2019 in Delhi and conveyed our sincere gratitude for formation of the new Ministry.

It is pertinent to mention here that the Academy consistently raised the issue for creation of Indian Council of Veterinary Research (ICVR) at various forums. The Academy drafted a proposal for creation of ICVR and submitted it to Sh. Radha Mohan Singh Ji, the then Hon'ble Minister for Agriculture and Farmers' Welfare for favourable consideration during first half of year 2018. The proposal was also submitted to Dr. Jitendra Singh Ji, Hon'ble MoS in PMO through DO letter on 10 Dec 2018 for favourable consideration with a request to put up the proposal to the Hon'ble Prime Minister. Myself and Dr. Prakash Rao met Secretary, DADF on 15 June 2018 and requested him for the establishment of ICVR in the interest of revitalising livestock sector. Subsequently, myself, Dr. SK Gupta, Secretary General and Dr. Ravindera Sharma member GC met Sh. Radha Mohan Singh Ji on 04 Oct 2018 and requested for establishment of ICVR. Later, on my request, Lt Gen DP Vats, PVSM, SM, VSM (Retd) Hon'ble MP Rajya Sabha also wrote a DO letter on 16 Dec 2018 to the Hon'ble Minister of Agriculture justifying formation of the proposed ICVR. The Minister assured the Hon'ble MP to look into the matter.

On 11 June 2019, we also met Sh. Tarun Shridhar, Secretary, Deptt of Animal Husbandry and Dairying and Sh. Upamanyu Basu Joint Secretary (LH) and other Ministry officials and gave few suggestions regarding formation of the ICVR- a cause for which our Academy had been pursuing the proposal vigorously with the Ministry for last one year. The Secretary and the Joint Secretary appreciated our efforts regarding formation of the Council. It is heartening to note that the Ministry has issued OM constituting a Committee for formation of new Council for Research and Associated Activities vide their letter No. A 12018/3/2016-Admn.I dated 20 June 2019. The competent authority wanted me to join the high powered Committee which I would have loved to; however, I conveyed my regret since I was proceeding to England for a period more than two months. Subsequently, on my personal request, the Ministry has included Dr. DVR Prakash Rao, VP and Dr. Ravindera Sharma, GC member of our Academy in the Committee- an honour for the Academy.

It is noteworthy that National Animal Disease Control Programme for Foot and Mouth Disease (FMD) and Brucellosis has been approved by the Cabinet on 31 May 2019 as a new Central Sector Scheme for a total outlay of Rs 13,343/- crore for five years (2019-2024). NAVS (I) heartily welcomes this initiative by the Govt.

I am sanguine that establishment of ICVR will boost much needed reforms to transform our vibrant livestock sector and thus pave the way for realization of PM's dream of doubling farmers income in real term through well deliberated strategies and innovations for enhanced animal production, health and marketing opportunities. The execution and effective implementation of policy framework requires strong public, private and people partnerships along with series of initiatives and reforms.

Once again the Academy thanks our Hon'ble PM for creating new Ministry of Fisheries, Animal Husbandry and Dairying. We assure Sh. Giriraj Ji, Dr. Sanjeev Kumar Balyan Ji and Sh. Pratap Chandra Sarangi Ji of our professional help in running the Ministry to achieve its assigned role. The move to have separate ministry for this sector is crucial as well as revolutionary step in right direction for the realisation of PM's vision for doubling of farmers' income through prioritization and need based diversification of livestock sector. Through this quarterly news letter, I appeal to all the Veterinarians and experts who are working in sectors of Animal Husbandry, Dairying and Fisheries in our country to rededicate themselves and make sincere efforts for transforming these sectors which have immense potential of boosting our economy to newer heights.

JAI HIND

Maj Gen Shri Kant

### **WVA Model Veterinarians' Oath**

**I, as a Member of the Global Veterinary Profession, do solemnly swear to use my scientific knowledge, skill and training:**

- To prevent, diagnose, treat and manage pain and disease in all animal species to the best of my ability in keeping with the principles of veterinary ethics and relevant law.**
- To communicate and help prevent the impact of diseases in humans that originate directly from animals or via vector transmission, the use of animal products or environmental contaminants of animal origin;**
- To advocate for the sustainable use of terrestrial, aerial, and aquatic animals in their diverse ecosystems through stewardship to reduce environmental impacts;**
- To contribute to animal, human, and environmental health by continually developing my competencies as a health professional, acting with integrity, and promoting animal welfare.**

## **CH. 3. EDITOR'S NOTE**

**(FREE, FAIR & FEARLESS)**

### **3.1: India for the first time gets an Independent Ministry of Animal Husbandry, Dairy & Fisheries**

The second quarter of 2019 witnessed a feverish national election which culminated into the formation a Central Government by National Democratic Alliance (Bhartiya Janata Party (B.J.P.) and its alliance partners) who had won with a thumping overall majority in the Parliament. The new government headed by the Prime Minister Shri.

Narendra Modi for the first time in the history of India formed an Independent Ministry of Animal Husbandry, Dairy & Fisheries to meet this long standing demand of the professionals of Veterinary Sciences, Animal Sciences, Dairying, and Fisheries. The new ministry is headed by the Union Minister Shri. Giriraj Singh and has two ministers of state - Dr. Sanjeev Kumar Balyan and Pratap Chand Sarangi. We very warmly welcome them in the ongoing overall progress of the profession.

The NAVS Editor had the rare privilege of being specially introduced to Shri. Giriraj Singhji at Bikaner Veterinary College in 2014 (Photo) and he fondly remembers his



interactions with him upon the introductory meeting as well as also at an impromptu meeting with him in the office of the Vice-Chancellor where only 4-5 veterans had heart to heart talk to him (in the unavoidable absence of the V.C., Prof. Dr. Col. A.K. Gehlot). Our heartiest congratulations to the members of the Ministerial team



### **3.2: World Zoonoses Day - July 6, 2019**

World Zoonoses Day is observed on July 6 every year to emphasize and bring the problem awareness amongst people, and teach them to take right action. Approximately 150 zoonotic diseases are known to exist. Wildlife serves as a reservoir for many diseases common to domestic animals and humans. Persons working with wildlife should be alert to the potential for disease transmission from animals. Neither animal handlers nor the general public have reason to be alarmed or frightened but everyone should respect the potential for disease transmission and use sound preventive measures. Generally, disease can be easily prevented than treated. Nowadays, there is effective prevention through advance measures in medical science and vaccination.

A zoonosis is any disease or infection that is naturally transmissible from vertebrate animals to humans. Animals thus play an essential role in maintaining zoonotic infections in nature. Zoonoses may be bacterial, viral, or parasitic, or may involve unconventional agents. As well as being a public health problem, many of the major zoonotic diseases



prevent the efficient production of food of animal origin and create obstacles to international trade in animal products.

Disease knows no borders and zoonotic disease continues to be global threat to health, resulting in millions of deaths worldwide and significant economic losses each year. As global trade and travel expands, zoonotic disease poses an increasing risk to human, animal and environmental health across to globe; thus there is an increasing need for a 'One Health' approach to address these issues.

The Food and Agriculture Organisation (FAO), World Health Organisation (WHO) and the World Organisation for Animal Health (OIE) released a guide on the 11th March entitled: Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries. This guide provides principles, best practices and options to assist countries to achieve sustainable and functional collaborations at the human-animal-environmental interface. It is also dynamic enough to be applied to other health threats such as antimicrobial resistance and food safety.

These three organisations, known as the Tripartite organisations actively encourage countries to use this guide and work collaboratively across human, animal and environmental health sectors to improve health in a sustainable way by using a One Health approach to address zoonotic disease.

[http://www.oie.int/fileadmin/Home/eng/Media\\_Center/docs/EN\\_TripartiteZoonosesGuide\\_web.pdf](http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/EN_TripartiteZoonosesGuide_web.pdf)

### **3.3: Indian Association of Women Veterinarians (IAWV): An Official Write-Up**

We are pleased to publish the following write up about the “Indian Association of Women Veterinarians” received at our request from the General Secretary of the Association Dr. Ms. Rajeswari R. She is a practicing Vet and a Social Entrepreneur in Women Development from Bangalore. We warmly welcome the development of professional association between our organizations and hope that this will continue to strengthen in future. We would also appreciate receiving professional news items (from all the regions to which their members belong) for publication in the NAVS Newsletter in mutual fulfillment of the objectives of our organizations by widespread sharing of ideas.

#### **Indian Association of Women Veterinarians (IAWV): Creating Women Leaders through Professional Empowerment and Networking**

Indian Association of Women Veterinarians (IAWV) formerly known as Indian Association of Lady Veterinarians (IALV) was formed by a team of eminent Women Veterinarians with the following Vision:

1. To create an opportunity for free and frank exchange of ideas among lady Veterinarians
2. To inspire and motivate lady Veterinarians to contribute more to profession.
3. To encourage Lady Veterinarians, in educating the rural women folk in increasing the productivity of eggs, milk and meat by adopting scientific animal husbandry and farming practices.
4. To create awareness about Veterinary Public health in the minds of women and children so that better health and hygiene in our country can be achieved.

The organization was instituted on October 2<sup>nd</sup>1985 under the able leadership of founder Secretary, Dr. Thankam Mathews, New Delhi with a vision of helping women

Veterinarians to share their ideas, concerns and appreciate the achievements and network. The Indian Association of Lady Veterinarians was formally inaugurated on 21<sup>st</sup> February, 1986 at College of Veterinary and Animal Sciences, Mannuthy, Kerala by Professor. Meenakshi Thampan , a renowned social worker and eminent scholar and chief guests Dr. Annamma Jacob , the first woman Director of Animal Husbandry of Kerala state , Dean Prof. G. Nirmalan and Prof. M. Krishanan Nair , Director of Research of Veterinary college, Mannuthy, Kerala The first Office bearer's team was constituted here with President - Dr. Padmavathi P from Andhra Pradesh, Vice president- Dr. Nalini Pradeep from Karnataka, Hon. General Secretary- Dr. Thankam Mathews from New Delhi,, Treasurer - Dr. Kunjammini Mukundan from New Delhi, Jt. Secretary- Dr.Sara Koshi from Maharashtra, Editor - Dr. Sosammalye from Kerala. Executive member-Dr. Lucy Paily from Kerala .The 3 State chapters of Kerala, Karnataka and Andhra Pradesh were also formed .

#### Milestones of IAWV

1986 - First National convention of IALV from 21<sup>st</sup>February, 1986 at Veterinary college- Mannuthy, Kerala . 40 members attended the conference

1987- II National convention of IALV by Karnataka Chapter at Bangalore - 11<sup>th</sup>- 12<sup>th</sup>, September, 1987.

The first bulletin of IALV was published during this conference and total membership increased to 128 women Veterinarians.

1988- III National Conference at Veterinary College, Hyderabad, Andhra Pradesh - 8<sup>th</sup>- 9<sup>th</sup> September, 1988

Significant achievements: The association elected new office bearers with Dr.Sakkubai Ramachandran (Karnataka) as President. The organization now had chapters in all southern states of Andhra Pradesh, Tamil Nadu, Kerala, Karnataka and Maharashtra

1989- IV National conference was held- at PUSA Institute, New Delhi, 7<sup>th</sup>-9<sup>th</sup> November, 1989

1991 -V National conference was held at Madras Veterinary College, Tamil Nadu -18<sup>th</sup>to 19<sup>th</sup> April, 1991

New National Executive Body was formed with Dr. Thankam Mathews as President. The association continued its mission of membership enrolment and formation of various state chapters.

2004- VI National conference at Madras Veterinary College-Tamil Nadu - 19<sup>th</sup> to 21<sup>st</sup>February, 2004

New Office bearers and executive body was formed under the leadership of Dr Pushpa Rathnaparkhe  
From Madhya Pradesh

2006- VII National Conference, at Veterinary College, Mannuthy, Kerala- 4<sup>th</sup> -5<sup>th</sup> January, 2006. During this conference it was decided to have Theme based Technical conference with National convention.

2007 VIII National conference at College of Veterinary Science and Animal Husbandry, Anjora, Durg, Chattisgarh. 20<sup>th</sup>-22<sup>nd</sup> January, 2007

**Theme: Emerging trends: Some reflections and new Dimensions in veterinary science and Animal husbandry practices.**

**2008 IX National conference at Veterinary College, Bangalore – 24<sup>th</sup> and 25<sup>th</sup> January, 2008  
Theme: Role of women veterinarians in augmenting rural economy through animal husbandry.”**

**More than 150 members participated in the convention.**

**2009 X National conference at College of Veterinary science and Animal Husbandry, Jabalpur, from 29<sup>th</sup> to 31<sup>st</sup> January, 2009**

**Theme: Contribution of women Veterinarians in up-liftment of Livestock Production through New technologies**

**New National level Executive Body was formed with President – Dr.Nalinikumari – Tripathi, Andhra Pradesh Membership increased to 186 and many more state chapters like Sikkim, Madhya Pradesh, Assam, Gujarat, were formed**

**2010 XI National Conference at V veterinary College, Tirupathi, A.P - 6<sup>th</sup> -8<sup>th</sup> January 2010**

**Theme: Advances in concepts of Animal welfare, Health and Animal husbandry**

**Membership increased to 308 women Vets**

**2013 XII. National conference at Gangtok, SIKKIM: 23<sup>rd</sup> to 24<sup>th</sup> October, 2013**

**Theme: Empowering rural women for sustainable for Animal husbandry through bridging the knowledge and policy gaps”.**

**The program was organized in association with Department of animal Husbandry, Govt. of Sikkim .**

**136 participants attended the conference.**

**2014 XIII. National conference at Gujarat: 23<sup>rd</sup> October- 24<sup>th</sup> October, 2013**

**Theme: Livestock Breeding Strategies for Productivity enhancement Towards Rural prosperity**

**More than 200 participants attended the conference .Membership increased to 345 Women Vets.**

**2015 XIV National conference at College of Veterinary Science, Shirwal, Maharashtra. From 8<sup>th</sup>-10<sup>th</sup> October, 2015**

**Theme: Recent Advances in Veterinary and Animal Sciences and Role of Women Veterinarians .More than 160 members attended the conference. Membership has increased to around 750 women Veterinarians.**

**2017: XV National conference at College of Veterinary Sciences, P.V Narasimha Rao Telangana Veterinary University, Hyderabad from 21-22 November, 2017**

**Theme: Role of Women Veterinarians in enhancement of Livestock Productivity, Health and welfare.**

**More than 250 women Veterinarians from all over the country participated in the conference. The total strength of women Veterinarians has crossed 800 from all over India.**

**IAWV Encourages Women Veterinarians through recognitions and AWARDS**

**IAWV General Body has instituted best VETERINARIAN AWARDS for BEST PRESENTATION (RESEARCH, CLINICAL & EXTENSION) based on the theme and session topics. BEST POSTER PRESENTATION is also awarded. AWARDS are given for each session.**

**IAWV encourages Young women Veterinarians through “Young women Scientists forum”. IAWV recognises 3 best young women Vets for their research or clinical case studies or extension activity in addition to sponsored awards. Closed to 50 young women Veterinarians participate in this competitive forum**

**The National Convention today has attracted a lot of participation from field Veterinarians and Private Practitioners, those working in Private firms and Farms or Developmental organization.**

**The respective state chapters are also now conducting state level meets, awarding and recognizing successful state level Women Vets, honouring senior women Vets, celebrate International women’s day and also are participating in policy making bodies of Veterinary council, institutes and Universities. Some state chapters are conducting empowerment programs for fresh women Veterinary graduates; they are also contributing in social development through free Veterinary camps, awareness camps for women Farmers etc.**

**Indian Association of Women Veterinarians (IAWV) has established it’s Chapters in Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh, Gujarat, Rajasthan, New Delhi, U.P, Haryana, Odisha, Assam, Meghalaya, J& K, Bihar, Tripura and many of the States. IAWV is providing enabling environment and platform for Women Veterinarians especially from the Field to share their ideas, experiences and best practices. Women Veterinarians are striving to achieve the goal of rural women empowerment through professional services and scientific knowledge transfer to farmers with dedication and commitment. There are many more milestones to achieve and the organization is focused in the mission of capacity building of women Veterinarians through this association and network. IAWV pledges and assures that Women Veterinarians shall handhold with the Government of India and respective state Animal Husbandry Departments, Veterinary council and Universities in the valuable mission of “ building a better rural economy through Animal Husbandry and thereby a better future for farming communities”.**

**Dr.Rajeswari R,  
Honorary General Secretary,  
Indian Association of Women Veterinarians,  
[iawv india <iawvindia@gmail.com>](mailto:iawvindia@gmail.com)**

### **3.4: A Bit Personal: Have I been a Rolling Stone? Hisar Veterinary College’s 1965-69 graduates meet again after 50 years.**

**My late father used to tell me that a rolling stone gains no mass. This was a time when most of the seniors always advised their juniors to stick to a particular place, any place, for as long as possible and let your aspirations wait at the base of a spiral to reach the top that does not seem inspiring to you at all. One never wants to strive to achieve something that does not seem to inspire him/her to be his/her life’s achievement. So I did not agree with him and chose my own course with the help of some of my honest and genuine mentors whose advice I followed blindly and never had to repent for the decisions taken, sometimes even on impulse.**

**While on my initial rolling spree I rolled from Bikaner to Bombay to Pant Nagar to Hisar (1965) to Bulgaria (D.Sc.) and reached back to Hisar in 1969 to join as Associate Professor. At that time, the 1965 to 1969 B.V.Sc. batch was on the verge of their graduation. This is the batch which met again in March 2019 after 50 years to celebrate**

their Golden Jubilee of becoming Vets. My best wishes to all of them. It reminds me that I too joined at Hisar in 1965 and it is 50 that I completed my D.Sc. this year. I can still recognize many of the faces in the accompanying photograph Their event brought back to mind my Emotional Attachment with Hisar Veterinary College, where I had the privilege of Associating with Stalwarts like Dr. C.M. Singh, Dr. I.P. Singh, Dr. R.P.S. Tyagi, Dr. O.P. Gautam, Dr. Gulati and so many others of that generation. It was here in Hisar that I first met Dr. Rama Kumar V., Dr. Jit Singh, and Capt. Jagdish Bhutani and many others who were to become my life long friends and colleagues. I did not seem to have had the fortune of meeting the current NAVS President, Maj. Gen. Shri Kant Sharma, as he must have been in his first or second year of B.V. Sc. studies before I left Hisar for Ludhiana in 1971 to be a founding professor of the new college there.

As for my rolling spree, it continued during and after 10 years of very fulfilling professional academic experience at Ludhiana. During 1971 to 1981, I had a teaching assignment at Baghdad (Iraq) Veterinary College for one academic year and another one for four months of delivering lectures to and exchange of ideas with faculties of four Veterinary colleges in Poland under U.G.C. fellowship. After 1981too, I continued rolling from Ludhiana to Maiduguri (Nigeria) to Tripoli (Libya) to Ahwaz (Iran) as visiting professor and back to India in 1999.



Reverting back to the question posed in the beginning: Have I been a rolling stone? The answer is a big YES. Did I gain any mass. It is for the readers, colleagues, students and all the rest who have known me to judge. As for me, I have thoroughly enjoyed the academic journey in

so many different institutions in the world. Learning and Teaching always go hand in hand, and there is no truth in the saying: “Those who can not learn take up teaching”. Teaching is the best profession to aspire for and to be a Professor should top all your other aspirations. Professors are the most remembered and honored persons in the world and they always feel young. Every year a new youthful lot joins them to learn. Being with all their young students always around them, they never seem to get time to grow old, at least mentally. It is not so in most of the other vocations. God bless the teachers of the world.

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

The editorial note on “Rare and Wild: Endangered Animals Which You Can See Only in India” in the April 2019 issue of the NAVS Newsletter was an eye opener. When I visited Gir National Park a few years back, I was surprised to see the way they were treated by the visitors. A few years back I had seen a lot of lions at Shimoga Wild Life Sanctuary, which is called Simhadham. These are now only a rarity. I was not aware that the lion faced monkey we see at Bandipur National Park is an endangered species. It is really pity that the Man, in his lust of money and good life on earth only for himself, has cared least about the fellow living beings and brought them to the edge of extinction. This article should be an eye opener to all. I think this article should be published in magazines of wider circulation and to the reach of common man for education. Thanks again. With regards: Dr. Ms. S. Nirmala, Prof and Head, Radiation Oncology, St John’s Oncology Center, St Johns Medical College and Hospital, Bangalore, Karnataka. e mail ID: [<drsnirmala303@gmail.com>](mailto:drsnirmala303@gmail.com)

While going through the latest issue of NAVS NEWSLETTER I was disturbed to read the name of Dr Gaya Prasad at Sr No 34 under the DECEASED NAVS FELLOWS. I am not sure if this pertains to ex-ADG or some one else. Best regards: Dr. Mohinder Oberoi, Email: (Editor’s response: Dear Dr. Oberoi, the deceased person is unrelated to Ex- ADG (AH) ICAR, who is very much with us. They share a common name.)

Dear Dr Kohli: Thank you very much for the excellent newsletter giving some very interesting information. Wishing you all the best; Warm regards.  
Dr. Shekhar Dutt, email: [<duttshekhar@yahoo.com>](mailto:duttshekhar@yahoo.com)

Dear Prof Kohli: Thanks for sending the April 2019 Issue of the NAVS Newsletter well in time. The Newsletter provides very useful information pertaining to professional activities, concerns and responsibilities. Your untiring efforts in maintaining the quality of the Newsletter deserve highest praise. Wishing you good health and best regards;  
Prof. (Dr.) M. P. Yadav, Formerly: President, National Academy of Veterinary Sciences (NAVS-India). email: [Yadav\\_mp@hotmail.com](mailto:Yadav_mp@hotmail.com)

Dr Sahib your services to uplift the veterinary profession can't be described.  
Congratulations, Sir. Dr. Satpaul Singh, [satpaulsingh12051958@gmail.com](mailto:satpaulsingh12051958@gmail.com)

Dear Dr Kohli: Extremely nice and timely Newsletter. Best regards:  
Dr. P K Gupta [<drpkg1943@gmail.com>](mailto:drpkg1943@gmail.com)

We are proud of you and your professional contributions; doing an excellent job as Chief Editor of NAVS. Stay blessed. Prof. Dr. K.M.L. Pathak, Formerly: President, NAVS (India); DDG (A.S.) ICAR, and Vice-Chancellor, DUVASU, Mathura. (Editor Responds: Thank you Dr. Pathak for your continued support and constant encouragement all along).

Dear Dr. Kohli sahib: Thank you very much for sending the issues of the NAVS Newsletter. It is very so thoughtful of you to remember me. It is a great service to the field of Veterinary Science. I too enjoy Editing, and was Editor for Indian Journal of Dairy Science for 8 years, when Mr. Animesh Bannerjee was the President IDA. With best wishes and regards:  
Dr. tej walli [<tkaywalli@gmail.com>](mailto:tkaywalli@gmail.com)

Dear Sir: Thank you very much for sharing the NAVS Newsletter 2019 and also publishing ILRI news item in your esteemed Newsletter. Recently, ILRI has launched a Livestock Master Plan at Bihar on January 28<sup>th</sup>, 2019. I am enclosing one write-up on the event for favor of publication in the ensuing issues of your esteemed NAVS Newsletter. Hope you will consider the publication for the interest of the Veterinary Fraternity of the country and the region. Best Regards, Dr. Habibar Rahman; Regional Representative for South Asia, International Livestock Research Institute, Block-C, First Floor, NASC Complex, CG Centre, DPS Marg, Pusa, New Delhi -110 012. Mobile: +91 9483527849; Tel: +91 11 2584 7885; Email: [r.habibar@cgiar.org](mailto:r.habibar@cgiar.org); [ilri.org](http://ilri.org)

Sir: We have seen posts on social media by a professional organization in which allegations of hap-hazardous functioning of NAVS have been made. The allegations, if true, will be a blot on the entire membership and fellowship of the academy which has bestowed their faith in the governing council (GC) and its elected members. Prof Dr) Ramakumar,V, Founder fellow NAVS(I) and ex-Secretary, V.C.I. (*Editor responds: The Academy has taken note of these allegations and has officially refuted them*).

Sir, A professional group of Vets is agitating against the activities of some members of the NAVS Governing Council regarding their involvement in paravet issues which do not fall in the scope of academy. Seniors should convene a meeting to look into the upcoming issues to check derailment. Best regards: Prof. (Dr.) Rishendra Verma, Former Secretary General, NAVS (India)

Respected Sir: On Behalf of Indian Association of Women Veterinarians I would like to thank you for the mail and NAVS Newsletter. The Newsletter is very well published and covers a wide range of information and topics and hope it will help all vets to share and network in a professional way. Dr. Rajeswari R. Gen. Secretary, I.A.W.V.: email ID: [<iawvindia@gmail.com>](mailto:iawvindia@gmail.com)

Dr Kohli you are born to serve the profession which you have chosen. Colonel Dr. Rajendra Garg, Member of Governing Council, NAVS (India).

Dr. Kohli: You are a great and humble soul with a huge passion for service to our chosen profession!! Regards and prayer for good health, happiness and long life to you sir!!  
Dr. Srinivasan Ramanathan, USA.

Dear Dr. Kohli: Thank you very much for regularly coming out with the NAVS Newsletter issues. Your efforts in this regard are commendable which enables the NAVS community to access the latest news in the country as well as abroad. Dr. Arvind Ingle, Officer-in-Charge, Laboratory Animal Facility, Tata Memorial Centre, ACTREC, Kharghar, Navi Mumbai- 410 210, MS. India. Email: [<aingle@actrec.gov.in>](mailto:aingle@actrec.gov.in)

## CH. 5: NAVS NEWS

### 5.1: National Seminar on Paravet Education and Services held on 16th April 2019 in New Delhi

Government of India, Ministry of Agriculture and Farmer welfare, Department of Animal Husbandry and Dairying organized a one day National Seminar on Paravet Education and Services on 16th April 2019 at NASC complex, Pusa, New Delhi. The event was organized in technical collaboration with NAVS (India) and coordinated by CCS National Institute of Animal Health, Baghpat, Uttar Pradesh. Here's a report by Maj. Gen. Shri Kant Sharma, President, National Academy of Veterinary Sciences:



#### National Seminar to Regulate Paravet Education and Practice

Livestock sector is an integral part of India's agricultural economy and plays a multifaceted role in providing livelihood support to the rural population. It is estimated that about 70 million rural households own livestock of one species or the other and provision of quality veterinary care for these animals cannot be over emphasized. Thus, there is growing need to generate qualified and trained human resource for faster growth of the livestock sector to provide quality nutrition to growing human population in our country. To fill the void for this growing need, unplanned mushrooming of institutes took place in various states- granting para-veterinary diplomas.



To ensure uniform education policies to generate properly qualified human resource in the livestock sector, an initiative was taken by Maj Gen Shri Kant, President NAVS (I) who along with Dr. Prakash Rao, the Vice-President held detailed discussion on this issue with Sh Tarun Shridhar, Secretary, Department of Animal Husbandry and Dairying, Govt. of India during last year. This was followed by a DO letter from Maj Gen Shri Kant on 20 Jan 2019. The Ministry vide their letter No. K-11053/86/2017-LH Pt I dated 05 March 2019 gave consent to organise the proposed seminar. Consequently DAHD in technical collaboration with the Academy organized a brain storming session in New Delhi under the Chairmanship of Animal Husbandry Commissioner (AHC), GOI to discuss Paravet Education and Services on 16 April 2019 at *NASC Complex, New Delhi*.

Many eminent persons from academia, administration and services in the field of animal husbandry from various government and non-government organizations participated in deliberations. The arrangements were coordinated by National Institute of Animal Health, Baghpat (UP).

Maj Gen Shri Kant, President of the Academy welcomed the delegates. This was followed by address by Sh. Upamanyu Basu, Joint Secretary (LH). Dr Miftahul Barbaruah, Director Veterinary Helpline India gave a talk on OIE status on Paravets Education which was followed by harmonization of Paravets Education in India by Maj Gen ML Sharma, Member GC of NAVS. The other topics like “Paravets Regulations in Himachal Pradesh”, “Role of State University in Paravet Education”, “Role of State Councils in Paravets Practices”, and “Uniform Policy of Admission, Duration of Training, syllabi and Nomenclature of Diploma Awarded” were covered by eminent speakers. Finally discussion and finalization of recommendations followed. Participants from almost all the states participated actively.

Dr. NP Dakshinkar, VC Kamdhenu University Chhatisgarh, Dr. Ashish Paturkar, VC MAFSU, Maharashtra, Dr. Y Hari Babu, VC SVVU, Triputi. and Sh. Sunil Gulati, Addl CS Govt of Haryana were very kind to spare their valuable time and participated actively during the deliberations.

The seminar was concluded with the note from the Chair that a comprehensive streamlining and strengthening efforts are required to develop guidelines for Diploma in Animal Husbandry Course for Veterinary Paraprofessionals including Curriculum of the Diploma programme for para-veterinary professionals, its entry level and the duration. This needs further discussions at different forums and suggestions from the states still need to be taken.

The Academy acknowledge with thanks for excellent arrangements made by team of Sh. Upamanyu Basu, JS(LH) which included Dr Parveen Malik, Dir NIAH, Dr. Parmod Kaushik, Deputy Commissioner DADH and Maj G Venkatesan, LSO DADH. The President, NAVS was actively supported by Maj Gen ML Sharma, Dr. SS Randhawa, Dr. Ravindera Sharma and Dr. Nem Singh for making the seminar a grand success. The minutes of the seminar will be issued by the Ministry shortly as gathered.

## **5.2: NAVS (I) Delegation Meets and Felicitates Union Minister and Minister of State of the Ministry of Animal Husbandry, Dairying & Fisheries and Meet the Secretary DADH and Joint Secretary (LH) DADH.**

### **5.2(a) Meeting with Hon'ble Union Minister**



The delegation met with Shri Giriraj Singh ji, Hon'ble Minister of Animal Husbandry and Dairying, Govt. of India. Gen Shri Kant congratulated Shri Giriraj ji for heading most important newly carved Ministry and expressed hope that under his dynamic leadership, livestock sector will transform and pave the way for welfare and economic growth of farming community. Since he had many important meetings in line including meeting with Hon'ble President of India, he could not spare time as required by the delegation but assured meeting NAVS executive in near future.

### **5.2 (b) Minister of State felicitated**



Maj Gen Shri Kant, President NAVS; DR. Prakash Rao, Vice-president; Dr. Nem Singh, Treasurer; Dr. Ravindra Sharma, GC member and Dr. Azad Kaushik, Professor, University of Guelph, Canada, also called on Dr. Sanjeev Balyan, Hon'ble MoS, Ministry of Animal Husbandry and Dairying, Govt. of India. Lt Gen DP Vats, PVSM, SM, VSM (Retd), Hon'ble MP Rajya Sabha accompanied the delegation on the request of the President. Both Gen Officers congratulated Dr. Sanjeev for winning the election second time from Muzaffarnagar and taking up the reins of newly established Ministry of Animal

Husbandry and Dairying. Further, the President felicitated the Hon'ble Minister by presenting a bouquet and a shawl and wished him good health and fruitful tenure and assured him to extend technical help to the Ministry. All the members requested him to expedite the establishment of ICVR in order to realize the dream of our Hon'ble PM for doubling farmers' income by 2022. Hon'ble Minister assured the NAVS delegation that the proposal is under active consideration of the Government.

### **5.2(C) Meeting with Secretary DADH and Joint Secretary (LH)**

Maj Gen Shri Kant, President NAVS; DR. Prakash Rao, Vice-president,; Dr. Nem Singh, Treasurer; Dr. Ravindra Sharma, GC member and Dr. Azad Kaushik, Professor, University of Guelph, Canada met with Sh. Tarun Sridhar, IAS Secretary, DADH and discussed progress on establishment of ICVR. Shri Tarun Sridhar apprised the NAVS delegation that the proposal as submitted by NAVS is under active consideration of Government and its establishment will be reality soon. He complimented the efforts of the President and his team.

The delegation also called on Sh. Upmanyu, Joint Secretary (LH), DADH and discussed various technical issues and gave various suggestion regarding formation/structure of ICVR. It was heartening to note that the Ministry was working on NAVS proposal submitted last year to the Minister of Agriculture and Secretary AH.

### **5.3: NAVS Delegation Calls upon the Chairman and Member, Agricultural Scientists' Recruitment Board (ASRB)**

The NAVS delegation also called on Dr Aditya Mishra, Chairman and Dr A.K. Srivastava, Member ASRB and exchanged pleasantries. The president reiterated NAVS' demand regarding parity of our Fellowship with that of NAAS and Fellowships of other Academies.



### **5.4: NAVS Delegation Meets the Newly Elected MP from Hisar**



Members of the NAVS delegation also met Sh. Brijender Singh, IAS (Retd) S/O Ch Birender Singh former Minister of Steel and Mining and great grandson of Sir Chhotu Ram, a crusader for the farming community during British Raj. The delegation congratulated him for his thumping victory from Hisar parliamentary constituency. This is for the first time that a BJP candidate has won from Hisar. He was Principal Secretary, Govt of Haryana and took premature retirement from the Govt. Service. Sh. Brijender Singh was felicitated by presenting a shawl.

## 6: VET TRACKS

### 6.1: Dr. Praveen Malik takes over As Animal Husbandry commissioner

Upon retirement of Dr. Suresh Honnappagol, Dr. Praveen Malik, Director, CCS National Institute of Animal Health, DAHDF, Ministry of Agriculture, Govt. of India, Baghpat, U.P. has recently taken over as Animal Husbandry Commissioner, in the same ministry, in New Delhi. Dr. Malik is a Fellow of our Academy and was a member of its Governing Council in the 2014-2017. During his tenure in GC of NAVS he had the distinction of strengthening and successfully managing the website of the Academy in its recent phases. We heartily congratulate Dr. Malik at his recent promotion and wish Dr. Honnappagol all the best.



### 6.2: Dr B.N. Tripathi, receives NAAS fellowship

Dr B.N. Tripathi, Director of ICAR-National Research Centre on Equines, Hisar, and a member of the NAVS (India) Governing Council was elected as a fellow of prestigious National Academy of Agricultural Sciences (NAAS- (Established in 1990) for his immense contributions in the field Animal Sciences as a dedicated researcher and administrator. He

has more than 150 papers published in peer reviewed journals, 5 books, 200 abstracts, 3 patents, etc. He is also the Fellow other 4 societies and academy. Earlier he was director of NIAH, Baghpat, Govt of India, MOA and Principal Scientist at ICAR-IVRI, Izatnagar. He has many awards in his name including Best Teacher Award (2009) of Indian Veterinary research Institute, Deemed University, Izatnagar and Dr. C.M. Singh Best paper award (2005) for publishing paper in Indian J. Vet. Pathol. 2005, 29(2): 71-77. (Gold Medal and certificate). Dr Tripathi was especially recognized for his work on Molecular Pathogenesis and Development of Diagnostics for Infectious Diseases with Particular Reference to Control and Management of Paratuberculosis (Johne's disease) in Animals and Glanders.

### 6.3: Dr. Arvind Ingle elected member of Governing Board of ICLAS

Dr. Arvind Ingle, *MVSc (Path), PhD, DICVP, FNAVS, FIAVP*, Tata Memorial Centre, ACTREC, Kharghar, Navi Mumbai- 410 210, MS. India, writes to inform us that he has been elected as a Member on the Governing Board of International Council for Laboratory Animal Science (ICLAS), Brussels, Belgium [www.iclas.org](http://www.iclas.org) in the General Assembly meeting of ICLAS held in Prague, Czech Republic on June 10, 2019. This information can be viewed at- <http://iclas.org/governing-board>.

ICLAS is an apex non-governmental organization working for the development of laboratory animal science in the world. ICLAS is an international non-governmental and non-profit scientific organization. ICLAS exists to promote high standards of animal care and use in education, research, testing, and diagnosis, to promote good science and foster humane practices in scientific research. Through an initiative of the United Nations Educational, Scientific, and Cultural Organizations (UNESCO), the Council for

International Organizations of Medical Sciences (CIOMS), and the International Union of Biological Sciences (IUBS), the International Committee on Laboratory Animals (ICLA) was conceived in 1956 as a nongovernmental organization to promote high standards of laboratory animal quality, care, and health. Its activities have included collaboration with the World Health Organization since 1961. In 1979, ICLA was renamed as International Council for Laboratory Animal Science (ICLAS).

[http://www.actrec.gov.in/animal\\_main.htm](http://www.actrec.gov.in/animal_main.htm)

<http://www.lasaindia.in/bearers.php>

[http://scholar.google.co.in/citations?hl=en&user=QB0DHLwAAAAJ&view\\_op=list\\_works&sortby=pubdate](http://scholar.google.co.in/citations?hl=en&user=QB0DHLwAAAAJ&view_op=list_works&sortby=pubdate)

#### **6.4: Dr. P. K. Gupta Honored by Limca Book of Records**

Prof (Dr) PK Gupta, write to inform that he has been awarded by LIMCA BOOK OF RECORDS for his outstanding contribution in the field of medical documentation. He is the former Head of the Division and Principal Scientist of IVRI and Former Advisor of World Health Organization, Geneva. His recognition for medical documentation will be an asset to all categories of scientists and clinicians engaged in medical and veterinary profession.

Dr. Gupta is an author of 12 books, numerous Scientific papers and 60 book chapters published from USA, UK and Switzerland and has won several international and National awards including a number of Lifetime achievement awards etc, in the medical and veterinary profession. He has been an Advisor of the World Health Organization and International Atomic Energy Agency, Vienna. Presently Dr Gupta is President and Patron Academy of Sciences for Animal Welfare and Patron of the Society of Toxicology. His email: [drplkg1943@gmail.com](mailto:drplkg1943@gmail.com) / [drpkg\\_brly@yahoo.co.in](mailto:drpkg_brly@yahoo.co.in)

#### **6.5: Dr. Nitin Bhatia Felicitated**

On the eve of World Veterinary Day, Karnataka Veterinary Association (Shimoga), honored Dr. Nitin Bhatia with 'Pashu Vaidya Siri Award' for his exemplary contribution to the Veterinary profession.

Dr. Nitin Bhatia is the Chief Editor, of "Intas Polivet" published from Ahmedabad, Gujarat (India), a meticulously produced professional magazine which numerous veterinarians of the country enjoy reading. The NAVS Editor is one the die hard admirers of Dr. Nitin Bhatia for his excellent work in producing the INTAS POLIVET, which he reads regularly. We extend our heartiest congratulations to him for his achievement. His contact particulars:

Ph: +91-079-66117358; +91-9328259201; Email; [dr\\_bhatia@intaspharma.com](mailto:dr_bhatia@intaspharma.com)

### **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".**

## **CH.7: VIEW POINT**

### **7.1: Prediction and Present Possibilities of Filmless X-Ray**

**Rama Kumar V**

Veterinary hospitals and institution should no longer go for old style x-ray machines using films. The latter must all be updated with digital units, no matter how costly they appear. Our vets must go for a cost benefit analysis to justify their demand for a useable and current unit. Those that are discarded by others should never be used

In September 1997 PHILIP J. HILTS wrote a forecast note on how the digital X-Ray Systems would replace the Old Films with Electronic Images in the near future. Today by 2019 we see that his prediction has come true. He said in 1997 "that the alphabet soup of imaging technology that arrived in medicine over the last two decades [ie.1970's] including PET scans, CAT scans, and M.R.I.'s, has to banish the, venerable old X-ray film, which is still used in most (70%) medical images[ie in 1990's]

He felt that the traditional X-ray machines are expected to be ushered out as half a dozen large companies introduce new X-ray systems to replace film with electronic images. The change has come late, for the simple reason that the pictures taken on X-ray film are so large even up to 18 by 24 inches with finely detailed images. But computers can now (ie in 1990's) handle the tens of millions of bytes of data needed to make and manipulate big pictures.

A radiologist and director of the Breast Imaging Center at Massachusetts General Hospital in Boston Dr. Daniel B. Kopans, who has worked with the new machines, predicted that, "Within a few years, the X-ray films will be replaced by digital images stored on computers from nearly all hospitals. That was when the new machines were being used on an experimental basis pending approval needed by the Food and Drug Administration (FDA) for marketing.

The pictures produced by digital plates appear at first glance to be roughly the same as X-ray film. But X-ray films, cannot be seen until the negative is developed (takes hours in a busy hospital). Then the image cannot be manipulated to enhance vision of one part of the image at the expense of another. The huge film negatives needed large film library rooms and cannot be shipped by E-mail or messenger to be viewed by another doctor.

Digital information is inherently more flexible than an image embedded in a piece of film, But developments may lie in the future. For example, Hilts said, taking several digital pictures simultaneously will allow computers to make three-dimensional pictures. "We've already gotten started with the 3-D work that is going to make us virtual radiologists" he said.

Images are stored as data, the pictures are available on video screens in seconds and (being digital) as many perfect copies can be sent anywhere in the world instantly, allowing mobile X-ray units to transmit images that can be read in large medical centers. The pictures themselves can be "rebuilt" from raw data to bring out some features, or change the image from black to white (control over contrast and definition) or can be sent into an "artificial intelligence" system that can help radiologists identify spot lesions

In both cases, the X-rays are absorbed by dense tissue, like bones, so that they appear white. X-rays than soft tissue such as muscle, to make dark gray areas on the picture. The main difference is how the X-ray patterns of white and gray are turned into images. Using film, chemicals in the emulsion darken when hit by X-rays. In digital systems, a chemical

layer of cesium iodide first absorbs the X-rays and gives off light, then photodiodes made of amorphous silicon pick up the light and give off corresponding electronic signals that light up pixels on a video screen. In the new X-ray machines, there are several million diodes, and that much pixels for an 18-by-24-inch image.

Numerous companies have already made and tested digital X-ray machines (in 1990's). Among the largest are the partnership of General Electric Medical Systems in Schenectady, N.Y., and EG&G Inc. of Wellesley, Mass., and another partnership which has brought together Siemens Medical Engineering of Germany, Thomson Tubes Electroniques of Moirans, France, and Philips Medical Systems of Holland. The European partnership has formed a new company called Trixell, based in France.

But as there were many who favored the new system there were some who had reservations. Andres A. Buser, general manager of EG&G's amorphous silicon department in Santa Clara, Calif., said in an interview that the images produced by film and digital methods were not identical. Film produces an image that is more precise in viewing tiny objects, while digital images are better at drawing out gray shapes from gray backgrounds. John M. Kucharski, chairman and chief executive of EG&G, said that the size of the potential market was shown in the estimated current value of the film X-ray machines now in use: about \$4 billion.

How the new machines will affect patients' bills is not yet known. At Siemens Medical, George Mitchell, a product manager, said that the new digital machines would cost more than conventional X-ray machines, which average about \$100,000. The digital machines will probably quickly take over the market when they are introduced, he said.

"In the long run, they cost less to own, because hospitals won't have to process film, then store it in big archives, and deliver it by hand when you want another doctor to look at it," Mr. Mitchell said.

*(Dr. Rama Kumar V. is the founder Fellow of the Academy and Former Secretary of the Veterinary Council of India.*

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

### **CONTACT US**

**PRESIDENT:** Maj. Gen. (Retd.) Shri Kant Sharma, SM, VSM;  
Ex-Vice-Chancellor, LUVAS, Hisar (Haryana). Ph. 9416314967;  
Email: [shrikant28@hotmail.com](mailto:shrikant28@hotmail.com)

**VICE-PRESIDENT:** Dr. D.V.R. Prakash Rao, Chennai. Ph. 9940099000  
Email: [Contect@prakashfeeds.com](mailto:Contect@prakashfeeds.com); Ph. 9940099000

**SECRETARY GENERAL** Prof. Dr. S.K. Gupta, LUVAS, Hisar (Haryana).  
Contact#: +9896068399(M), Email: [drsurengupta@rediffmail.com](mailto:drsurengupta@rediffmail.com)

**TREASURER:** Dr. Nem Singh, Ghaziabad, U. P. Ph. 9818244710, 9711760402  
Email: [singhnem1945@gmail.com](mailto:singhnem1945@gmail.com)

**EDITOR:** Prof. Dr. R.N. Kohli, 922, Sector-A (B&C), Vasant Kunj, New Delhi-70  
Ph. 011-46065021; 9968920200. Email: [rnkohli@gmail.com](mailto:rnkohli@gmail.com)

## CH. 8: NATIONAL & INTERNATIONAL VETERINARY NEWS

### 8.1: Livestock Master Plan Launched in Bihar

Dr. Habibar Rahman, Regional Representative for South Asia, International Livestock Research Institute, New Delhi, writes to inform us that recently the ILRI launched a Livestock Master Plan at Bihar on January 28<sup>th</sup>, 2019 and we are sharing this here in the general interest of the Veterinary Fraternity of the country and the region.

The Bihar livestock master plan (LMP) and livestock sector analysis (LSA) were prepared by a joint team effort of livestock and planning experts from ILRI and from Government of Bihar. The livestock sector analysis (LSA) formed the basis for the development of the LMP for the 5-year period of 2018-19 to 2022-23. The LMP is a series of five-year development investment plans or 'roadmaps', to be used to complement and help implement the Agriculture Road Map. This effort was funded and supported by the South Asia Agriculture Program of the Bill & Melinda Gates Foundation. The main objective of the Bihar LMP is to provide evidence-based justification for public and private investments in a set of recommended priority commodity value chains (VCs) of the Bihar livestock sector.

The livestock sector in Bihar has a number of technical challenges, which need to be addressed for the sector to play its potential role for further economic development of Bihar. Some prominent challenges are scarcity of feed and poor feed quality and regulation, poor animal genetic potential to produce Animal Source Foods (ASF), inadequate animal health services, lack of organized and continuous livestock production improvement training, loss of livestock due to flooding, and low budget for investment to improve the sector.



Shri Nitish Kumar, the Honorable Chief Minister of Bihar launched the Livestock Master Plan (LMP) of Bihar on 28 January 2019 at Patna, Bihar. Senior Officials including Shri Sushil Kumar Modi, Deputy CM; Shri Pashupati Kumar Paras, Animal and Fisheries Resources Department (AFRD) Minister; Anjani Kumar Singh, Advisor to CM; Sunil Kumar Singh, Revenue Board Chairman; Subash Sharma, Development Commissioner; Dr N Vijayalakshmi, Secretary, Animal and Fisheries Resources Department were also present in the occasion. The LMP team comprising of Dr H Rahman, Regional Representative for South Asia, International Livestock Research Institute (ILRI) and Dr Barry Shapiro, Senior Livestock Development Advisor, ILRI; Dr Srivalli Krishnan, Senior Program Officer, Bill & Melinda Gates Foundation (BMGF); Amitabh Singh, Bihar Livestock Development Agency



Project Director; Surendra Nath Mishra, Veterinary Doctor, Govt. of Bihar; Dr Vijaya Bhaskara Reddy, Dairy Expert engaged by ILRI and Dr Vijayalakshmy Kennady, Technical officer, ILRI also participated in the occasion.



In her opening remarks, Dr N Vijayalakshmi stated that the Livestock Sector Analysis shows the great potential for the livestock sector of Bihar to achieve the developmental goals of the Government of Bihar, including the Sustainable Developmental Goals, reducing poverty and improving livelihood opportunities for the people of Bihar. She introduced the ILRI and Gates Foundation teams to the Chief Minister and conveyed her thanks and wishes to the whole team for the development of Bihar LMP. She also added that LMP could promote and encourage the development and well being of women, youth and small-scale farmers of the state. Livestock sector contributes around 26.7% to the overall agricultural GDP of Bihar.

Shri Sushil Kumar Modi, Deputy C M, thanked Dr H Rahman and Dr Barry Shapiro from ILRI and the team from Gates Foundation for the development of Bihar LMP. He also informed that Bihar is has significantly grown its fish production and the state is exporting fish to various parts of the country. The Livestock Master Plan will lead to 1.5 times rise in dairy production, 10 times in poultry production and double the fisheries output. He also added that proper development of livestock sector in Bihar could be achieved with the help of livestock master plan. Shri Pashupati Kumar Paras, opined that the livestock master plan, will emphasise on various steps to give a push to dairy, goat-rearing, poultry, piggery and other allied sectors with an aim to improving food security and reducing poverty, through better and more sustainable use of livestock.

The Honorable Chief Minister advised the State Animal Husbandry Department and Bihar Animal Science University to develop Pashu Vigyan Kendra (Animal Science Centre) on the lines of the Krishi Vigyan Kendra (Agriculture Science Centre) in the state of Bihar. He also declared the parity of pay of veterinarian with that of medicos.

*ILRI has already developed the LMP for the countries like Tanzania, Ethiopia and Rwanda. LMP has made a tremendous promotion in the development of livestock sector in all these countries. Development of cross-bred dairy, red meat production, pig production, poultry production and meat production-consumption balance are certain key achievements out of LMP.*

## 8.2: Biosecurity Workshop for the Management of Emerging Infectious Diseases of Pigs in NER

A National Workshop on “Biosecurity for Effective Management of Emerging Infectious Diseases of Pigs in North Eastern Region (NER)” was organized on 23/03/2019 at ICAR-NRC on Pig, Rani, Guwahati. Disease Investigation Officers (DIOs) & Representatives from State Veterinary & Animal Husbandry Departments of NER States, incharges of AICRP on Pig & Mega seed Project on Pig located in the NER and Scientists from other ICAR Institutes participated in the Workshop. Scientific persons from College of Veterinary Sciences, A.A.U., Khanapara and institutional staff also participated in the workshop. In the inaugural session, The Welcome address by Dr. S. Rajkhowa, Director, ICAR-NRC on Pig was followed by the address by the Chief Guest, Prof (Dr.) M.P. Yadav, President, Indian Association of Veterinary Microbiologists, Immunologists & Specialists in Infectious Diseases (IAVMI) and Former President of NAVS (I). A compendium was released on this occasion.

Prof M.P. Yadav, in his special lead paper advocated that Pig farming has the potential to enhance income and profits of landless and marginal farmers particularly in the NE Region of the country. As NER has porous boundaries with neighboring countries like Myanmar, Bhutan, China and Bangladesh he emphasized the need for strict implementation of biosecurity measures between States as well as at international borders. He also pointed out that faster movement of animals and animal products and liberalized trade has increased the risk of disease transmission. A total of six lead paper presentations made by the experts were followed by a Round Table Discussion on issues related to important diseases of pigs in different NE states, their control and biosecurity aspects. In the valedictory session, certificates were distributed to participants, followed by Vote of thanks and National Anthem.

## 8.3: INDIA CELEBRATES WORLD VETERINARY DAY 2019

Though many reports of celebrations of World Veterinary Day were not received by us, we saw some posts on the Social Media. There was one by a very devoted senior veterinarian, Dr. Unnikrishnan, who wished all vets a happy WVD and tagged 48 of them to his post. We too wish him the same. His post reads as under:

8.3.1: **"Animals are Special Creations of God, Serving them is Serving Him all the more closely"**

Veterinary profession in all aspects is truly a multidisciplinary one and a practicing Veterinarian on a daily basis is called upon to perform multiple roles. A veterinarian who has practiced in the field will definitely vouch for this. In the Veterinary College not only did we read-study and understand different animal species of both the farm and the non farm sector we were also taught and prepared for alleviating the pain and sufferings of these beautiful creations.

We were expected to deal with all the animals ranging from Companion pets, Farm animals, Wild animals and off course their masters and custodians. Looking at the multifaceted roles that we were expected to don in the field, it was a sense of Guardedness, Excitement and Bewilderment that filled each of us.

As we progressed we improvised, and specialized honing our skills and talents. Guarded we continue to be because of the risks involved, Excited we still are because everyday we get to see a new patient or something new in a patient but the sense of Bewilderment has given way to a sense of Confidence. The way we Veterinarian's have accomplished this indeed

speaks volumes about our inquisitiveness, intuitions and adaptability. Today we have specialized and there are specialists catering to Pets, Farm animals, Wild animals, Poultry and Bird's et al. We also have amidst us Extension Professionals who hold the key in spreading and disseminating the good practices and cutting edge technologies far and wide. Undeniably this sophistication and facilities that we see and have today were either absent or unheard of during the yester years. Yet in the absence of all such facilities our seniors had indeed done a yeomen service and set yardsticks for us to uphold and improvise. On this hallowed day lets at the outset place on record our humble gratitude and salutations to all those teachers and seniors who taught, mentored and guided us. Unlike many other professions ours is a very small community, and the connections between us happen fast and deep, perhaps because we readily understand the language of our Patients who convey the needed simply by their looks and feelings.

We as a Professional Community carry immense responsibility towards alleviating the pain and sufferings of mute animals, and ensuring their well being. Added to this we also have significant role in helping the state and its citizens achieve the goal of having safe and secure food of animal origins, by ensuring good feed and nutrition, better management and treatment to our farm animals so that the end consumers get safe meat and meat products.

The increasing incidence of Diseases with Zoonotic importance, that can cause distress and disaster in the society, Diseases of Livestock and Birds that can wipe out flocks and cripple the Livelihoods of the Farming community, keeps us on our toes to design and devise the right strategy towards Prevention and Control of such episodes. Antibiotic resistance in Microbes too is a matter of Challenge for the Veterinary Profession as much as it is for Human Doctors.

To meet these new Changes and Challenges, we need to improvise both academically as well as in Outlook. ACVM, Jaipur, the first Veterinary College, in the Private Sector, was a bold attempt in this direction. Without getting into the Details and Specifics, there was one thing for sure. With a teaching Faculty drawn from different states, it would have been a lifetime experience for Students graduating from there, something similar to An All India Institute. Unfortunately the experiment seems to have failed, and, if so, let's hope this failure will rekindle many more efforts of this kind.

As mentioned in our solemn oath we must ensure that merit and fair play alone will matter uppermost when it comes to dealing with Professional matters and issues. VCI, the apex body that frames guidelines and rules for the profession as a whole, must as a watch dog ensure that this noble profession will remain an epitome of goodness and fairness.

**After all, this Noble Profession requires fair hands to deal with Patients who are the most beautiful creations of God.**

We are happy to share his post here for our readers.

### **8.3.2: World Veterinary Day Award 2019**

For nearly 20 years, The World Veterinary Day Award is providing an opportunity to celebrate the contributions of veterinarians to the health of animals and society by honouring one WVA Member's activities related to the theme every year. The 2019 World Veterinary Day celebrated *the Value of Vaccination*. Vaccines are one of the most valuable tools in any veterinarian's arsenal. These medicines protect the health of animals and the livelihood of farmers. This year The WVA is partnering with HealthforAnimals to improve visibility of the Award and increase the value of the award to \$2500. Applications were due

by 27th May 2019. Award is open to all WVA Veterinary Associations who may submit evidence of any activities that demonstrate their support of the *value of vaccination*. This could include local vaccine campaigns for animals, educational seminars for the public, media campaigns, new research, or anything else that promotes the value of vaccination. This information is presented here for the benefit of Veterinary Associations in India for applying for the award next year as the date of submission for this year is over.

[http://www.worldvet.org/uploads/docs/wvda\\_2019\\_-\\_announcement\\_.pdf](http://www.worldvet.org/uploads/docs/wvda_2019_-_announcement_.pdf)

### 8.3.3: Dr G C Negi College of Veterinary and Animal Sciences, CSK HPKV, Palampur celebrates World Veterinary Day

World Veterinary Day on the theme, 'Value for vaccination' was celebrated at College of Veterinary and Animal Sciences, CSK Himachal Pradesh Agricultural University, Palampur on 27.04.2019. The event was jointly organized by the Veterinary Teachers Association and faculty and staff of the Veterinary College.

Prof. R K Asrani, President of the Association and Dean, COVAS Prof Mandeep Sharma, welcomed the dignitaries and the guests, and the latter presented major activities and achievements of his college. He said that scientists and students have always brought glory to the alma mater by their excellent performances. During his address to the Veterinary Scientists and Students, Maj Gen (Dr) Shri Kant Sharma, President, National Academy of Veterinary Sciences and Chief Guest of the function, said that learning was a continuous process and asked the scientists and students to have dreams and then work hard to pursue them. He urged the scientists and the students to serve the livestock keepers with dedication and motivate them for getting their animals vaccinated. Vaccination will not only keep the animals in good health but would also reduce the risk of transmission of diseases from animals to humans, apart from savings of crores of rupees that are spent towards their treatment every year. Prof Ashok Kumar Sarial, Vice-Chancellor of the University, in his presidential remarks appreciated the work at Dr G C Negi College of Veterinary and Animal Sciences (COVAS) and said that such programmes make the society aware about their important and useful work. He emphasized that many diseases can be controlled by timely vaccination and appreciated that COVAS was regularly organizing vaccination camps in the clinics as well as the rural areas. Dr Subhash Verma, Professor Microbiology, delivered a talk on "Value of vaccination".





Dr R.K.Asrani, President, Veterinary and Animal Sciences Teachers' Association (VASTA) apprised the audience the activities like blood donation camps, mini marathon run, anti-rabies vaccinations, slogan writing and poetry competitions, poster making, and quiz competitions etc that were organised to mark the occasion. The Chief Guest and the Vice-Chancellor awarded winners of these competitions. Statutory officers, Head of the departments, College faculty and State Animal Husbandry Officers also attended the inaugural ceremony. Later, a cultural night, "Mehak-2019" was also organised in the university auditorium in which Major General Shri Kant Sharma shared his life experiences with the students and the faculty and appreciated the performance of students.

#### 8.4: New Antibiotic Potential from bee-made compound to fight antibiotic resistance.

A group of scientists at the University of Illinois at Chicago, USA isolated a molecule Api137 which is a derivative of insect-produced antimicrobial peptide Apidaecin. The molecule was able to interfere with the ability of *Escherichia coli* to produce proteins by binding to the ribosomes and traps release factor (RF) RF1 or RF2 subsequent to the release of nascent polypeptide chain. This Api137 mediated depletion of cellular pool of free RFs causes the majority of ribosomes to stall at stop codons before polypeptides are release, resulting in a global shutdown of translation termination, as mentioned in the article published in the journal *Nature structural & Molecular Biology* (2017). The scientists suggested a potential lead to a new antibiotic to kill increasingly resistant bacteria to the commercially available drugs we currently have.

Source: <https://microbiologyonline.org/what-s-new/news>

#### 8.5: African swine fever outbreak: Emerging threat to the Indian Swine population?

African swine fever virus (ASFV) is present in a stable equilibrium with its wildlife hosts, warthogs and soft ticks of *Ornithodoros* spp., in a unique ecological niche in Eastern and Southern Africa. In these hosts, the virus can persist over an extended time without causing disease. The recent emergence of highly contagious ASFV in the Southeast Asian countries, (first reported in the northeastern part of China in August, 2018) caused a death toll of more than one million pigs. The outbreak had spread to neighbouring countries such as Cambodia, Vietnam, Mongolia, Hong Kong and recently the North Korea. Infected animals suffer high fever, internal haemorrhages, and most often, death. According to Dirk Pfeiffer, a Veterinary Epidemiologist, at the City University of Hong Kong, "This is probably the most serious animal health disease (the world has) had for a long time, if not ever".

Denis Norville, reported in The Science magazine that the Vietnamese Government had announced on the 13<sup>th</sup> of May that 4% of the national herd are dead or culled and that this crisis is not only economic hardship but also threatens food security of the region. Currently, neither effective vaccine nor treatment is available to tackle the contagious hemorrhagic disease. There are promising vaccines under development according to Yolanda Revilla of Severo Ochoa Centre for Molecular Biology in Madrid. However, the vaccines are still at least 3 – 4 years away from being commercially viable. Hence keeping the virus out of the country is the best shot for the rest of the neighbouring countries in the Southeast Asian region. Myanmar and Laos have weak Veterinary infrastructures and surveillance system, and this factor could pose a threat to the India and the rest of the region and even help the virus becoming endemic in the region.

Source: <https://www.sciencemag.org/news/2019/05/african-swine-fever-keeps-spreading-asia-threatening-food-security>

## CH. 9: DAIRY NEWS

### 9.1: INDIA CELEBRATES WORLD MILK DAY 2019

The Food and Agriculture Organization (FAO) of the United Nations urges countries and organizations to take the occasion of World Milk Day to crusade on the importance of milk among citizens. World Milk Day is celebrated in over 35 countries around the world currently, with China, India, Vietnam, Australia, and Denmark as regular participants of the event. India is the world's largest milk producing country. The fact that milk is a good source of nourishment is no secret. The fact that many countries celebrate the World Milk Day shows that milk is a global food. Milk is one of the greatest blessings that is given to Humans by Nature. Milk contains 14 of the 18 most important minerals and vitamins we need every day. India is the world's largest producer of milk - a complete food.

**9.1.1: THE INDIAN DAIRY ASSOCIATION (H.Q), New Delhi, celebrated the World Milk Day as an event of interaction among the Dairying Associated Professionals on the current issues related to Dairy Science and Industry.**



The delegates included representatives from the cooperative milk unions, private dairies, Mother Dairy, Member of Haryana Kisan Ayog, and numerous academicians, administrators, dairy scientists (some stalwarts and veterans) as well as representatives of dairy institutions, dairy magazines / journals and dairy farmers etc.

Following were some of the major issues that came under discussion:

Dr. G.S. Rajorhia, President-IDA drew the attention of the participants towards the *challenge posed to dairy industry by dairy analogues* and emphasized that as per the new FSSAI guidelines milk secreted from the udder of mammals can only be called milk. Thus commercialization of dairy analogues at low prices will adversely affect the livelihood of Indian dairy farmers. Dr. Rajorhia has been sharing information with IDA members and readers of IDA publications on topics such as “Fortification of Milk with Vitamin A & D”,

“Validation of Claims on A2 Milk”, and “Cholesterol Myth Resolved”, etc. to spread the knowledge about the nutritional importance of milk and milk products in daily diets. *He also welcomed the initiative of Govt. of India wherein a separate Ministry for Dairy, Animal Husbandry and Fisheries has been created.*

Highlighting the importance of milk on World Milk Day, Dr. Kiran Singh, former DDG (AS), ICAR said civilization developed because of milk and animals. Prof. Rakesh Mohan Joshi, Professor and Chairperson, Indian Institute of Foreign Trade, New Delhi raised the issue of increasing cost of milk production in India. He said, “If we did not care about this, Indian market may be flooded with imported dairy products in future.” Dr. R.S. Khanna, Dairy Consultant said that dairy sector is a good source of nutritional security, and as such we must try to reduce the cost of milk production. He informed that whereas the cost of hydroponic grass comes to Rs. 3 per kg, the normal green grass costs Rs. 8 per kg. and recommended to promote hydroponic grass production in the country. Shri A.K. Khosla, Vice President-IDA said that milk is a global food. In India, milk is not only the livelihood for our 7 crore farming families but it is a source of their nutritional security too. Due to lack of financial support, they are unable to give quality fodder to their animals which affects the quality of their milk. Shri Sangram Chaudhary, Managing Director, Mother Dairy also advocated that we cannot afford to continuously increase the cost of milk production. Adequate management of dung can provide some financial assistance to the milk producers. He informed that Govt. of India has announced recently “vaccination for all the dairy animals” and in this regard, Rs. 13,000 crore has also been allocated for it. This is a good sign that the Government of India is now paying more attention towards the sector. Chairman, Ajmer Milk Union Shri Ram Chandra Choudhary said that government must create a milk grid and mid-day milk must be promoted in every state by the Govt. of India.

Prof. A.K. Misra, Chairman, ASRB said, “We have neglected our indigenous breeds and focused on crossbred for the last six decades. But with the help of latest breeding technology, we can overcome our shortcomings in short period and improve milk productivity.” Shri Animesh Banerjee, former President-IDA said that IDA must come forward and share the responsibility of ensuring organic certification for the dairy sector.

*Prof. (Dr. ) R.N. Kohli, Editor, NAVS(I); Dr. Omveer Singh, MD, NDDB Dairy Services; Shri S.S. Mann, Chairman, IDA (NZ); Shri B.B. Garg, Treasurer, IDA (NZ); Dr. S.K. Kanawjia, Emeritus Scientist, NDRI; Dr. Shyam Bhaskar, Member Haryana Kisan Ayog; Dr. Jagdeep Saxena, Editor, Dugdh Sarita; Shri Sharad Gupta, Editor, Dairy India Yearbook; Shri Rajdeep Mann, Director, Mann Ventures; Mr. Dipesh Thakur, NCDFI; Shri R.K. Chhabra; Shri S Ram Mohan Rao, Mother Dairy; and Dr. Rekha Dahiya, Pashu Vigyan Kendra, Palwal also spoke on the occasion.*

### 9.1.2: All India WMD Celebrations:

Indian Dairy Association (South Zone) in association with SRS of ICAR-NDRI and Alumni Association, SRS-NDRI Bengaluru celebrated World Milk Day at NDRI Bengaluru.



Dr. Suresh S. Honnappagol, Former Animal Husbandry Commissioner, Dept. of AH & Dairying, Ministry of Agriculture & Farmers Welfare, Govt. of India was the Chief Guest and delivered a lecture on “Present Status and Future Prospective of Dairying in India”. Mr. C.P. Charles, Chairman, IDA (SZ), highlighted the importance of creating awareness among the general public about the nutritional benefits of



milk and milk products. Dr. K.P. Ramesha, Head, ICAR-NDRI (SRS) and President, Alumni Association, underlined the importance of milk in human nutrition and also mentioned that creation of new Ministry of Dairying, Animal Husbandry and Fisheries by Govt. of India would provide added impetus to the dairy development in our country. Commemorating the occasion, an essay competition on the theme of 'Dairying as a means for doubling farmers' income' was also held for the students of Dairy Science.

IDA (West Zone) in association with Bombay Veterinary College, Mumbai organized an awareness campaign to educate consumers on simple and easy methods of detecting common adulterants like water, sugar, starch etc. in milk. A demonstration of these tests was organized in Aarey Colony in the early morning where many health conscious consumers come for morning walk. More than 200 consumers participated in the event. Several other events were also organized to celebrate the World Milk Day in Mumbai.

Indian Dairy Association (Kerala State Chapter) in association with College of Dairy Science and Technology, also celebrated the Day at Verghese Kurien Institute of Dairy and Food Technology, Mannuthy, Thrissur. The celebrations started with flag hoisting by Dr. S. N. Rajakumar, Chairman IDA (Kerala State Chapter) in the gracious presence of Dr. P.I. Geevarghese, Vice Chairman, IDA South Zone. Dr. Divya M.P, Convener, welcomed the gathering. Dr. P.I Geeverghese delivered the Keynote address.

PDDDB, IDA (Punjab State Chapter), Milkfed Punjab and Baani Milk Producer Co., Patiala

In order to mark auspicious occasion of "World Milk Day" celebrations on 1st June 2019, Punjab Dairy Development Board in collaboration with Indian Dairy Association (Punjab State Chapter), Milkfed Punjab and Baani Milk Producer Company Patiala organized a Seminar on "Sustainable Growth in Indian Dairy" on this day at National Institute of Technical Teachers Training and Research, Sector 26, Chandigarh. The core idea was to highlight the importance of milk for the human health as well as the need to step up the policies and extension programmes connected with the promotion of dairy sector in Punjab. It was indeed a grand seminar in which S. Balbir Singh Sidhu, Hon'ble Cabinet Minister, Department of Animal Husbandry, Fisheries, Dairy Development and Labour was the Chief Guest. The seminar was presided over by Shri Raj Kamal Chaudhary, IAS, Secretary, Department of Animal Husbandry, Fisheries, Dairy Development. Dr. A.K. Srivastava, Member, ASRB-ICAR, New Delhi emphasized that we should adopt new technologies in livestock production such as detection of heat by using electronic nose and embryo transfer for faster growth of germ plasm. He highlighted various other challenges facing the dairy sector. Shri K.S. Pannu, IAS, Secretary, Agriculture Department Punjab and Mission Director, Mission Tandarust Punjab who fought a long battle against milk and ghee adulterators, informed the gathering that persons who were selling ghee under proprietary food and misleading the consumers with the new name of adulterant ghee like mild fat, cooking medium have been strictly tackled with and their registrations have been cancelled. Now, the State laboratory has been strengthened enough to detect adulteration of vegetable oil with milk fat.

A WMD function organized at Sanjay Gandhi Institute of Dairy Technology (SGIDT), Patna, included a number of events such as a declamation and poetry contest was organised among the students. The students and the faculty distributed flavoured milk to the children and women folk in a slum area and created awareness about the nutritional benefits of milk. At a lecture organized at the institute Dr. J.B. Prajapati, Principal and Dean, SMC, College of Dairy Science, Anand was the key speaker. He presented a

comprehensive overview of the dairy sector in India and world over. Dr. Rameshwar Singh, Vice-Chancellor, Bihar Animal Sciences University, Patna apprised the audience about the initiatives that the Govt. of India and Bihar are taking for the dairy farmers. Dr. B.S. Beniwal, Dean, SGIDT raised his concern about the manner of reporting by the media on the issues of adulteration which creates confusion and fear in the mind of consumer about milk and milk products.

Other organizations that celebrated WMD include IDA (Bihar State Chapter), Karnataka Milk Federation, Swaayam Ksheer Producer Company Ltd. etc.

## 9.2: Dairy farmers of Andaman & Nicobar Islands to get a new dry fodder source for their livestock

Dr N K S Gowda Secretary, IDA South Zone, Bangalore, has forwarded the following note about the technical workshop conducted for dairy farmers of Andaman & Nicobar Islands on use of areca sheath as dry fodder source for dairy animals.

The NABARD, Port Blair and Adhithi Milk and Agri Producer Co. Ltd (AMAAPCO) in association with ICAR-NIANP, Bangalore and ICAR-CIARI, Port Blair organized technology demonstration cum training workshop on “Use of Areca sheath as dry fodder for ruminant livestock in Andaman & Nicobar Islands from 21-23 February 2019. Dr N K S Gowda,



Principal Scientist, ICAR-NIANP, Bangalore visited different regions of Andaman Islands (Sippigad, Kadamtala, Billyground and Diglipur) and conducted demonstration cum training workshop for farmers and officials of



Department of Animal Husbandry, A&N Islands Integrated Development Corporation Limited (ANIIDCO). There was a very good response to this programme and total of about 300 participants attended. Areca cultivation is a lifeline of people of A & N Islands and there is a huge potential to use dried areca sheath as dry fodder source for livestock in this region and mitigate the shortage of fodder to enhance milk and livestock production. Need of a suitable policy from Developmental agencies to utilize this local resource was highlighted on this occasion.

## 9.3: IDA Has a New Western UP Chapter

IDA MEMBERS residing in Western UP districts decided to form the Western UP Chapter of IDA (NZ) with headquarters at Meerut. The Chapter was inaugurated by the President, Indian Dairy Association, Mr. G.S. Rajorhia in the presence of Shri S.S. Mann, Chairman IDA NZ) and Shri G.P.Verma, Secretary IDA (NZ). A new Executive Committee took the charge which comprised of Shri Vijendra Agarwal, Chairman; Shri Kalyan Bhadra, Vice Chairman; Shri B.M. Singh, Secretary-cum-Treasurer; and Shri Vimal Chaddha; Shri Vasant Choudhury; Mr. Rajveer Singh; Shri Pratap Choudhary; and Shri V.K. Tewari as members of the Chapter. Mr. Satya Pal Aggarwal, MLA and many other members of the IDA attended the inaugural function. The committee took a decision to 34rganize National Level Conference at Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut

on “Problems of Dairy Farmers in India”. The suitable dates for National Level Conference will be announced soon.

#### **9.4: Revival of Dairy Exports after global deficit**

AFTER FOUR YEARS of slowing down, India's dairy exports have revived to achieve the second best show ever in financial year 2018-19 due to supply deficit-led global price increase in skimmed milk powder (SMP) and other milk derivatives including ghee and butter. Data compiled by the Agricultural & Processed Food Products Export Development Authority (APEDA) showed India's total exports of dairy products were worth \$404 million between April 2018 and February 2019, up 56 per cent from \$260 million in the comparable period last year. Experts believe dairy exports continued with an estimated worth \$100 million in March and total FY19 export is estimated to have surpassed \$500 million, the second highest after the record of \$728 million set during the FY 2013-14.

Sudden revival in dairy exports has brought a major relief for Indian exporters who were waiting for several years for global markets to turn into deficit and prices to revive. During the last four years, Indian market was also facing huge supply surplus of milk and its derivatives including SMP, ghee and butter.

#### **9.5: World’s First Complete Parent Wise Genome Assembly of Buffalo developed by NDDB**

BUILDING UPON THE SUCCESSFUL LAUNCH OF INDUSCHIP, a customized genotyping chip for indigenous cattle and their crosses, NDDB has achieved another milestone with the development of complete de novo genome assembly named “NDDB ABRO Murrah” of riverine buffaloes. To ensure better accuracy, for the first time a totally different approach i.e. trio binning has been used for separating haplotypes of a buffalo using a father-mother-offspring trio. The genome assembly developed by NDDB has achieved more than 99% genome coverage. Shri Dilip Rath, Chairman, NDDB said that this newly developed genome assembly would provide more insights about buffalo genome and desired impetus for implementing Genomic Selection programme in buffaloes to achieve faster genetic progress in Indian buffalo population. It may be worth mentioning here that buffaloes are contributing more than 50% of India's milk production.

#### **9.6: Shri Sangram Chaudhary appointed MD of Mother Dairy**

THE BOARD OF DIRECTORS OF MOTHER DAIRY FRUIT AND VEGETABLE has appointed Shri Sangram R. Chaudhary as the company's new Managing Director, w.e.f . 1 May, 2019. Over three decades, Shri Chaudhary has been in the dairy sector of the country and was earlier the Executive Director, National Dairy Development Board (NDDB). He is a Post Graduate in Rural Management from Institute of Rural Management Anand (IRMA), and Master of Science in Life Sciences from University of Gujarat, Ahmedabad. He is a Member in the Central Executive Committee of Indian Dairy Association (IDA). NAVS (I) wishes him great success in his new assignment.

#### **9.7: NDDB urges finance minister to rationalize taxes on dairy**

THE NATIONAL DAIRY DEVELOPMENT BOARD (NDDB) has called upon the Union Finance Minister Mrs. Nirmala Sitharaman to rationalize direct and indirect taxes on dairy items and reduce the Goods and Services Tax (GST) on ‘ghee’ and flavoured milk, among other things. Making his submissions at a meeting convened by the Union Finance Minister for pre-budget consultations with stakeholder groups from agriculture and rural development at North Block, New Delhi on 11 June, 2019 NDDB Chairman Shri Dilip Rath also pitched

for reduction of GST on breeding outputs, besides a cut in import duty on import of bovine germplasm. Shri Rath also impressed upon the finance ministry to increase export incentives as well as exempting incomes of dairy farmers and milk producer institutions from income tax. The Finance Minister sought views of participants to boost the socio-economic infrastructure of rural sector and ways to eradicate unemployment and poverty through development of agriculture and allied sectors as well as non-farm sector. Union Minister of State for Finance and Corporate Affairs Shri Anurag Thakur and Secretaries from the departments of Finance, Expenditure, Revenue, Agriculture, Cooperation, Farmers Welfare, Animal Husbandry & Dairying, Rural Development, Fisheries and others were present at the meeting. Director-General of Indian Council of Agricultural Research (ICAR), the Chief Economic Advisor, the Chairperson of Central Board of Direct Taxes (CBDT) and Member of NITI Aayog also attended the discussions.

### **9.8: Government to Provide Training to 2000 Dairy Farmers under Pradhan Mantri Kaushal Vikas Yojana**

UNDER THE PRADHAN MANTRI KAUSHAL VIKAS YOJANA (PMKVY), a flagship scheme of the Ministry of Skill Development and Entrepreneurship (MSDE), Government of India, training would be provided to 2000 dairy farmers on job as dairy farmers/entrepreneur of Punjab. This information was shared by Dr. H.K. Verma, Director of Extension Education, Guru Angad Dev Veterinary and Animal Sciences University (GADVASU), Ludhiana. He informed that the University organised 10 Recognition of Prior Learning (RPL) trainings at GADVASU Ludhiana, Regional Research and Training Centre (Talwara) and at village: Barsana, Jagraon and more than 300 farmers, have been trained till date. GADVASU, Ludhiana has been awarded the prestigious RPL project in the agriculture sector. Under RPL training, basic information about dairy farming is provided covering various topics viz; breeds and their characteristics, common diseases of dairy animals and their management & prevention by adopting proper vaccination and de-worming practices, clean milk production, nutritional interventions and knowledge about various Information and communication tools & their uses in dairy farm management etc. After the training, assessment of trainees by an independent agency is conducted on the third day, in which online evaluation is done by theoretical and practical viva of the trainees by the assessor. Certificates are awarded to trainees for this training by the online system under the Skill India Mission.

### **9.9: Meghalaya Cabinet Approves Creation of Directorate of Dairy Development**

THE MEGHALAYA CABINET approved the proposal for creation of a new Directorate of Dairy Development in the state to increase milk production. Home Minister Shri James K Sangma said the state government had launched the Meghalaya Milk Mission and Rs.215 crore has been sanctioned. "In view to really increase the milk production in the state, we have decided to approve the creation of a directorate of dairy development," he said. The state Cabinet has also approved a proposal for enhancing the grant-in-aid to night and morning ad-hoc secondary schools in the state. The Home Minister informed that the government has decided to implement uniform grant-in-aid extended to such schools unlike earlier where different amount was given to different categories.

The cabinet has also approved the proposal for enhancing the factory license and renewal fees after a gap of 18 years.

## Ch. 10: SCIENCE, HEALTH & SOCIETY

The health information included in this publication, unless stated to be otherwise, has not been evaluated by the Food & Drug Administration or any other medical body. We do not aim to diagnose, treat, cure or prevent any illness or disease. Information is shared for educational purposes only. You must consult your doctor before acting on any content.

### 10.1: New Central Government Takes over in India after General Elections:

#### NEW CABINET MINISTERS



## 10.2: Ayurveda doctors to join Maharashtra Govt. Health Centres

Under Ayushman Bharat, the state plans to convert its 10,600 sub-centres into Health and Wellness Centres by 2022. At HWCs, patients can get treatment for 12 health issues-from non-communicable diseases, mother and child health, family planning, contraceptive services to basic emergency services.

The first batch of nearly 1,000 ayurveda doctors have cleared a six-month 'bridge course' that will allow them to provide basic treatment using modern medicine at state-run health and wellness centres (HWC). The candidates, designated as mid-level health providers (MHLPP), have been handed over joining letters for 850 functional HWCs. Dr Satish Pawar of National Health Mission said nearly 100 candidates out of the 1,250-odd who were trained couldn't clear the exam. (TNN | April 23, 2019, 12:56 IST)

## 10.3: To Lower Blood Pressure and Stroke Risk: Eat Your Breakfast Daily

We need not eat fruits or vegetables in order to lower our blood pressure. Not even fish, eggs or meat either. This is as what has been revealed in this revolutionary Japanese study is totally different from the norm.

But you absolutely must eat your breakfasts daily if you want to lower your blood pressure and reduce your risk of a stroke and heart attack by up to 36%. In January 2016, a Japanese research team published a study in the journal *Stroke* that concluded that people who skipped breakfast were more likely to suffer a stroke than those who ate in the mornings.

They first collected the breakfast eating habits of 82,772 Japanese adults, which were recorded in 1995, and categorized them by weekly breakfasts:

- 0-2 per week
- 3-4 per week
- 5-6 per week
- 7 per week

They recorded all the cardiovascular events that occurred within their subjects over the following 15 years and compared it with the breakfast statistics.

The comparison clearly showed that those who never ate breakfast were:

- Significantly more likely to suffer from a stroke than those who regularly or always enjoyed it, and...
- 36% more likely to have a stroke that involved a cerebral hemorrhage.

A previous study with 26,902 subjects published in a 2013 edition of the journal *Circulation* found that people who skipped breakfast were 27% more likely to suffer a heart attack than those who ate regular breakfasts.

So why do breakfast skippers have such a high risk of stroke and cerebral hemorrhage?

High blood pressure increases the chance of strokes and heart attacks by up to six times.

And the authors of both the Japanese and American studies found that people who skipped breakfast had higher blood pressure scores than those who consumed it.

So, your number one health goal should be to lower your blood pressure, and eating breakfast daily will get you closer to that goal. (by Christian Goodman | Mar 27, 2019 Blue Heron Health News [bhsupport@blueheronhealthguides](mailto:bhsupport@blueheronhealthguides).)

## 10.4: Genome editing research on monkeys raises ethical questions

Researchers are raising ethical questions about a new study that transplanted a human gene into monkeys, first reported by Chinese media and detailed in a [MIT Technology Review story](#). Scientists at China's Kunming Institute of Zoology created monkeys with extra copies of a human gene linked to intelligence. The authors claimed that the experiment did show some of the intended effect — the animals did better on memory tests, for instance. But outside researchers are more concerned about the ethics of such experiments, including that they could lead to more aggressive alterations. “The use of transgenic monkeys to study human genes linked to brain evolution is a very risky road to take,” geneticist James Sikela told Tech Review. But there is no indication that these experiments will stop, as the lead researcher told Tech Review that he plans on studying other human brain evolution genes. (STAT: Morning Rounds [<newsletter@statnews.com>](mailto:newsletter@statnews.com))

## 10.5: First baby born in trial of “three-parent” fertility treatment

The first baby has been born in a pilot trial of a controversial infertility procedure that uses genetic material from three people. A 32-year-old Greek woman gave birth to a six-and-a-half pound baby boy this week after multiple IVF failures led her to try the procedure known as mitochondrial replacement therapy. Both the mother and the infant are in good health, according to Embryotools, the Spanish company sponsoring the trial. The procedure — which involves using mitochondria from a donor egg, the intended mother’s nucleus, and sperm from the father — is banned in the U.S., but other countries, including the U.K. and Greece, allow it. (STAT: Morning Rounds [<newsletter@statnews.com>](mailto:newsletter@statnews.com))

## 10.6: Zapping brain with electricity boosts working memory in older adults, study finds

Shooting electrical current into the brain of older adults reversed the decline in working memory that comes with aging, a new study finds. Researchers tested the approach in two groups of 42 people, one with people ages 20-29 and the other with people ages 60-76. The older group correctly answered questions in a memory test roughly 80% of the time — compared to the younger groups’ 90% — but quickly caught up to the younger groups’ rate after getting 25 minutes of alternating current that was delivered through a cap embedded with electrodes. The results are still preliminary, and additional research will be needed to determine how often stimulation would have to be given, and whether the artificial lab task translates into real-world benefits. (STAT: Morning Rounds [<newsletter@statnews.com>](mailto:newsletter@statnews.com))

## 10.7: Why Arthritis Cells Attack Themselves?

Autoimmune diseases (like arthritis), is a case where your immune system targets your body’s own tissue and destroys it with inflammation, and is understandably extremely interesting to medical scientists.

To put it simply, why would such an otherwise sophisticated and well-constructed body do such a stupid thing? Scientists from the Technical University of Munich have now explained the process whereby this occurs in detail in a new study in the journal *Cell Report*. And this may lead to a clearer path towards a cure for arthritis.

Your immune system must attack and remove everything it considers to be an abnormal biological material. To do this, it uses T-cells to attack invaders, and also to remove cells that have been damaged and that are identified as abnormal. These T-cells are incredibly strong and often use inflammation to kill invaders.

The only problem? If the cells in your joints, for example, have been slightly damaged by a relatively normal biological process, such as oxidation or by harmless bacteria, these T-cells will destroy your joints until nothing remains of it.

This is where regulatory T-cells, or Tregs, step in. The job of Tregs is to inhibit unnecessarily strong responses by these T-cells and to block unnecessarily strong inflammation. In other words, when your T cells begin to destroy your joints because your immune system incorrectly labels them as harmful, these Tregs stop the immune overreaction, curb the inflammation, send the T-cells away, thereby saving your joints. If you have a condition like arthritis, however, then these Tregs are clearly not doing their job, and this is the puzzle that scientists are still trying to solve.

For some reason, particularly in the case of severely inflamed tissue, Tregs lose their identity and stop operating as the brake system that the immune system often needs, particularly in the misinterpreted cases. As such, the authors of the new study used mice to investigate why this happens.

When they observed severely inflamed tissue in mice, they noticed that a protein called Blimp1 was sometimes present and sometimes absent. When it was present and active, the Tregs worked. When it was absent, the Tregs lost their identity and remained inactive. When they deliberately removed Blimp1 from the mice's inflamed tissue, the mice developed something akin to an autoimmune disease.

Not only did the Tregs lose their abilities to inhibit the immune response, but they also seemed to develop properties that made them prone to inflammation promotion. This is partly why many autoimmune diseases are genetic, as it is a genetic process that activates Blimp .

This is groundbreaking research, as it is the first time that scientists have managed to get a glimpse of why the immune system is so dysfunctional in autoimmune diseases like arthritis. Unfortunately, it will still be years before this discovery translates into any form of functional medication for arthritis. Till then, we will have to rely on diet and other lifestyle changes to tackle inflammation.

(ShellyManning: Apr 20, 2019 bhsupport@blueheronhealthgu)

### **10.8: World's first malaria vaccine set for field trial**

After over three decades in development and almost \$1 billion in investment, the cutting-edge field trial will be rolled out in Malawi's capital Lilongwe and later in Kenya and Ghana. Large scale pilot tests will spearhead for the world's most advanced experimental malaria vaccine (RIS, S/ASO1, trade name Mosquitrix) in a bid to prevent the disease that kills hundreds of thousands across Africa each year. The trial aims to immunize 1,20,000 children aged two years and under to assess the effectiveness of the pilot vaccine and whether the delivery process is feasible. Four successive doses of this first and only injectable vaccine targeting P. falciparum, the most prevalent strain in Africa, must be administered on a strict timetable for it to work. According to World Health Organization the vaccine show partial protection from malaria infection in four of 10 children who received four doses over a four-year period. Globally 219 million malaria cases were recorded in 2017, approximately 80% of which are found in India and 15 African nations. (AFP | April 23, 2019)

### **10.9: UAE woman wakes up after 27 years in a coma**

A woman from the United Arab Emirates (UAE) who was seriously injured in a traffic accident in 1991 has made a seemingly miraculous recovery after emerging from a 27-year-long coma. Munira Abdulla, who was aged 32 at the time of the accident, suffered a severe



brain injury after the car she was travelling in collided with a bus on the way to pick up her son from school. Omar Webair, who was then just four years old, was sitting in the back of the vehicle with her, but was left unscathed as his mother cradled him in her arms moments before the accident. Ms Abdulla - who was being driven by her brother-in-law - was left seriously injured, but last year regained consciousness in a German hospital. Omar has opened up about the accident and about his mother's progress following years of treatment in an interview with the UAE-based newspaper The National. "I never gave up on her because I always had a feeling that one day she would wake up," Omar told the newspaper. "The reason I shared her story is to tell people not to lose hope on their loved ones; don't consider them dead when they are in such a state," he added. "My mother was sitting with me in the back seat. When she saw the crash coming, she hugged me to protect me from the blow."

### **10.10: Dietary supplements linked to serious events in children, young adults**

Of all the more than 40,000 adverse events related to food and dietary supplements that were reported to the FDA between 2004-2015, nearly 1,000 were in those aged 25 and under, according to a new study. About 17% of these events resulted in hospitalization, with 2% resulting in deaths. Most of the serious events in those younger than 18 were due to vitamins. In those ages 18-25, negative outcomes from taking weight loss supplements were the most common. In this age group, supplements for energy, muscle building, or sexual function were more frequent in men than women. At the same time, a new study finds 65% of probiotic supplements lack the proper information for consumers to make an informed medical decision about taking them. Missing was information about the strain of bacteria or yeast used, the beneficial dose level, and evidence from at least one human trial. (Source: [newsletter@ethealthworld.com](mailto:newsletter@ethealthworld.com))

### **10.11: Novel Type of Immune Cell Discovered in Type 1 Diabetes Patients**

*Excerpt from:* <https://www.the-scientist.com/news-opinion/novel-type-of-immune-cell-discovered-in-type-1-diabetes-patients>

According to textbooks, cells of the adaptive immune system must be either B cells or T cells both, or anything in between. But proving once again that nature is full of surprises, scientists have now discovered a novel type of lymphocyte in type 1 diabetes patients that combines characteristics of B cells and T cells. The researchers suggest that these hybrids could play an important role in the disease by encouraging the immune system to attack the body's own insulin-producing cells, they report today (May 30) in *Cell*.

"The presence of a cell that expresses both B-cell receptors and T-cell receptors in and of itself is very novel," remarks Jane Buckner, an immunologist and president of the Benaroya Research Institute, a Seattle-based nonprofit that conducts research on diseases of the immune system. However, more research is needed to establish its role in type 1 diabetes, adds Buckner, who wasn't involved in the study.

The research team came across the rogue cells while they were looking for a specific type of B cell they had previously studied in the blood of type 1 diabetes patients. Using flow cytometry, they observed cells that present both B-cell and T-cell receptors on their cell surface, and upon further investigation, they revealed that the cells also express genes

specific to both B and T cell lineages. These “dual expresser” (DE) cells were significantly more abundant in type 1 diabetes patients than in controls, explains Abdel Hamad, an immunologist at Johns Hopkins University School of Medicine and the senior author of the study.

The team made another unexpected discovery when analyzing the genomes. The research team came across the rogue cells while they were looking for a specific type of B cell they had previously studied in the blood of type 1 diabetes patients. Using flow cytometry, they observed cells that present both B-cell and T-cell receptors on their cell surface, and upon further investigation, they revealed that the cells also express genes specific to both B and T cell lineages. Of DE cells extracted from three unrelated people who all had type 1 diabetes. Embedded in the multiple genes that encode the cells’ B-cell receptor, Hamad’s group found a unique sequence that was present in the majority of DE cells. This was unusual, because that particular region of the B-cell receptor sequence is typically very diverse and differs starkly between the individual cells, Hamad explains. Notably, he and his colleagues could only find the sequence in DE cells from type 1 diabetes patients: they didn’t find it in DE cells from a healthy control subject, nor in a public database of 37 million B-cell receptor sequences from healthy participants.

Mark Peakman, an immunologist at King’s College London, mentioned that the most surprising aspect of the study is the discovery of the new lymphocytes. “These cells, to my knowledge, have not been described by anybody in any other setting,” he notes. Until now, scientists have understood B and T cells as two lineages with a distinct development pattern: T cells grow up in the thymus, and B cells in the bone marrow and lymph nodes. “The textbooks will have to be rewritten if this study is true,” adds Peakman, who wasn’t involved in the new research.

## **11. 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))**

**11.1: 9th Dairy Tech India 2019, 30 Aug. - 1st September, 2019, Bangalore International Exhibition Centre, Bangalore. An international exhibition on dairy products, processing and packaging machinery and allied industries. Details: [www.dairytechindia.in](http://www.dairytechindia.in)**

**11.2: IDF World Dairy Summit, 23 - 26 September, 2019, Istanbul, Turkey. Theme: “Milk for Life”. Expected to bring over 2000 participants from around the world to discuss: Dairy Science and Technology; Marketing & Economics; Food Safety & Nutrition; Farm Management; Animal Health and Welfare; and Environment. Details: <http://www.idfwd2019.com>.**

**THE NAVS NEWSLETTER is compiled, edited and circulated by the NAVS Editor Prof. Dr. R.N. Kohli, for and on behalf of the NATIONAL ACADEMY OF VETERINARY SCIENCES (INDIA). It is for private circulation only. All correspondence regarding the Newsletter may kindly be addressed to the Editor ([rnkohli@gmail.com](mailto:rnkohli@gmail.com)).**