



Society for Conservation of Domestic Animal Biodiversity
XIX Annual Convention & National Symposium
Contemporary Technology for Animal Genetic
Resource (AnGR) Management



21-22nd September, 2022; ICAR-NBAGR Karnal

TECHNICAL PROGRAM

21st SEPTEMBER, 2022 (DAY 1, WEDNESDAY)

Registration (9:00 - 10:00 AM; Reception Desk)

Inaugural Session & Foundation Day Program

(10:00 AM - 1:00 PM; PG Nair Conference Hall)

Chief Guest : Dr B N Tripathi, Deputy Director General (AS), ICAR
Guests of Honor : Dr M S Chauhan, Vice Chancellor, GBPUA&T, Pantnagar
Dr Triveni Dutt, Director, ICAR-IVRI, Izatnagar

(LUNCH 1:00 - 2:00 PM, FOOD COURT)

Tech. Session I: Technology for sustainable utilization of AnGR

(2:00 - 4:00 PM; PG Nair Conference Hall)

Co-chairs : Dr V K Saxena, ADG (AP&B), ICAR
: Dr Arjava Sharma, Former Director, ICAR-NBAGR
Rapporteurs : Dr Amit Kumar, Sr Scientist, ICAR-IVRI
Dr Sonika Ahlawat, Scientist (SS), ICAR-NBAGR

Lead lectures (15 + 3 min)

- 1. Animal cloning technology for conservation and diversity of animal genetic resources (AnGR)**
Manmohan S. Chauhan, Manoj K. Singh and Naresh L. Selokar
- 2. High density chip for diversity of indigenous cattle breeds**
Ravi Kumar Gandham and Vikas Vohra
- 3. Embryo transfer technology (ETT) – a farmers perspective**
Suresh Kumar Singla

Oral presentations: (5+2 min)

S.N.	Title	Author(s)
1	High Salt Diet (HSD) affects Sperm Function via disrupting the Skeletal Homeostasis I-006	<u>Shrabani Saugandhika*</u> , Leena Sapra ¹ and Rupesh K. Srivastva ^{1*}
2	Effect of melatonin on heat shock amelioration and cell proliferation I-067	S. Saini, R. Kaur, Ashutosh, N.L. Selokar and <u>M.K. Singh*</u>
3	Identification of estrus candidate proteins in buffalo saliva and development of epitope-based peptide-directed antibodies that recognise the vmo1 protein for accurate identification of estrus in buffaloes I-079	<u>Rubina K. Baithalu*</u> , Mamta Pandey, Neeraj, Laishram K. Singh, Shubham Singha, Sangram Dash, Surya Prakash Pannu, Abhijeet Fernandes, T.K. Mohanty, Sudarshan Kumar, S.S. Lathwal, A.K. Mohanty
4	Functional quality characteristics of the meat from an improved free-range chicken variety I-053	Renuka Sehrawat, <u>Rekha Sharma*</u> , Sonika Ahlawat, Vivek Sharma, MS Thakur, AK Mishra and M S Tantia
5	Differential expression of myogenic regulatory factors (MRFS) in the postnatal longissimus dorsi muscle of indigenous breed of Jeju island of South Korea and Berkshire breed of pigs along with their co-expression with Pax7 I-014	<u>Simrinder Singh Sodhi*</u> , Neelesh Sharma, Ki-Duk Song, Sang SuShin ^c , Sung Jin Lee, Jeong Hyun Kim, Nameun Kim, Dae Cheol Kim, Sung Jong Oh, HakKyoLee, Vikas Vohra and Dong Kee Jeong (Online)
6	Knockdown of acetyl-coa carboxylase beta (acacb) gene influenced expression of key fatty acid metabolism genes in chicken myoblast cells in vitro. I-060	<u>G. Sushma*</u> , Tarun Kumar Bhattacharya, P. Jaya Laxmi, S.T. Viroji Rao, R.M.V. Prasad, M. Kanakachari, Ch. Shiva Prasad (Online)

Also join us on ZOOM

<https://us02web.zoom.us/j/83691229885?pwd=cllNVlZ5bU5rSHZOUzNjUjg2RXk2UT09>
(Zoom ID: 836 9122 9885 | Passcode: 969989)

S.N.	Title	Author(s)
7	Genetic characterization of f_4 inbred strain of swiss albino mice using microsatellite markers I-071	B. L. Saini, <u>Pushpendra Kumar*</u> , Amit Kumar, Shweta Sachan, Mitek Tarang, Shobhana Kaushal, Anuj Chauhan, Jay Prakash (Online)
8	Advancements in genetic strategies to reduce enteric methane emission from ruminants I-080	Anuradha Panwar, <u>Manjit Panigrahi*</u> , Harshit Kumar, Divya Rajawat, Sonali Sonejita Nayak, K.A. Saravanan, Bharat Bhushan (Online)
9	Umbilical cord blood derived mesenchymal stem cells used for regenerative therapy to control mastitis and metritis in cattle I-085	Vivekananda Verma, Sshubham Ghai, Sikander Saini, Shama Ansari, Abhishek Thakur, Amit Kumar, Priti Devi, Suman Chopra and <u>Dhruba Malakar*</u>

(TEA BREAK 4:00 - 4:30 PM, FOOD COURT)

National AnGR Quiz Competition

(4:30 - 6:00 PM; PG Nair Conference Hall)

Chairperson	: Dr Hema Tripathi, NC-NAHEP, Edn. Div., ICAR
Co-chair	: Dr Archana Verma, Head, AGB Div, ICAR-NDRI Dr Bina Mishra, PS, ICAR-IVRI
Coordinator	: Dr Anshu Ahlawat, Associate Professor, CVSc &AH, Junagarh
Co-coordinator	: Dr Mahesh S Dige, Scientist (SS), ICAR-NBAGR

Participating Teams:

Zone	College /Institute Team	Team members (UG students)
EAST	College of Veterinary Science, Khanapara, Assam Agriculture University, Jorhat	1. Chayanka Sekhar Laskar 2. Annesha Kashyap
NORTH	IIVER- LUVAS, Rohtak	1. Piyush Choudhary 2. Thakur Nishant Jaswant
SOUTH	Veterinary College & Research Institute, TANUVAS, Orathanadu, Tamil Nadu.	1. J. Thilahayswari 2. P. Yuvanjanani
WEST	College of Veterinary Science & AH Kamdhenu University, Sardarkrushinagar (Team I)	1. Nachanya Ankit 2. Khokhariya Miteshbhai Jagabhai
	College of Veterinary Science & A.H., Kamdhenu University, Junagadh (Team II)	1. Jayesh Ramani 2. Dodiya Mahipalsinh

Annual Convention of the Society

(6:00 - 7:00 PM; PG Nair Conference Hall)

Cultural Evening (Ghoomar)

(7:00 - 9:00 PM; Food Court)

(DINNER 9:00 PM ONWARD; FOOD COURT)

22nd SEPTEMBER, 2022 (DAY 2, THURSDAY)

Young Scientist Award presentation

(9:00 - 10:30 AM; PG Nair Conference Hall)

Co-chairs	: Dr T K Datta, Director, ICAR-CIRB, Dr. B. Prakash, Former Director, ICAR-CIRC
Rapporteur	: Dr Sanjeev Singh, Pri. Scientist, ICAR-NBAGR

Oral presentations: (10 + 3 min)

S.N.	Title	Author(s)
1	Genome-wide scan for copy number variations using HD-SNP array in Sahiwal cattle YS-001	<u>Oshin Togla</u> and Anupama Mukherjee
2	Assessment of mastitis using Thermal image analysis among dairy breeds during autumn and winter season YS-002	<u>Gayathri, S. L.</u> and Mukesh Bhakat
3	Random regression models to estimate genetic parameters for body weights in Murrah buffaloes YS-003	<u>Pooja Joshi</u> and Archana Verma

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S.N.	Title	Author(s)
4	Design and evaluation of low-density SNP panel for Vrindavani cattle using different imputation approaches YS-004	<u>Sheikh Firdous Ahmad</u> and Amit Kumar
5	Identification of genome-wide deleterious DNA mutations in Sahiwal cattle YS-005	<u>Utsav Surati</u> and Saket K Niranjana
6	Genomic scans reveal SNP loci in candidate genes regulating heat tolerance and adaptation and patterns of phylogenetic diversity in diverse Indian native cattle breeds YS-006	<u>Nampher Masharing</u> and Manishi Mukesh (Online)
7	Unravelling milk and colostrum characteristics of Ladakhi cows adapted to high altitude hypoxia environment: A metabolomic approach YS-007	<u>Umesh Kumar</u> and Manishi Mukesh
8	Comparative evaluation of RNA isolation methods for expression profiling of sperm quality related genes during heat stress in murrah buffalo bulls YS-008	<u>Rashi Vasishth</u> and R.S. Kataria

(TEA BREAK 10:30 - 11:00 AM, FOOD COURT)

Tech. Session II: Characterization and improvement of native breeds to strengthen national food systems (11:00 AM - 12:30 PM; PG Nair Conference Hall)

Co-chairs : Dr R S Gandhi, Former ADG (AP&B) ICAR
Dr D K Sadana, President, ILSI

Rapporteurs : Dr Anupama Mukherjee, Pri. Scientist, ICAR-NDRI
Dr Raja KN, Sr Scientist, ICAR-NBAGR

Lead lectures (15+3 min)

- 1. Animal genetic resources (AnGR) management in India: status and way forward**
B P Mishra and S K Niranjana
- 2. Community based management of animal genetic resources**
A.K. Thiruvankadan

Oral presentations: (5+2 min)

S.N.	Title	Author(s)
1	Mitochondrial dloop DNA variation in Halari donkeys II-002	<u>Anuradha Bhardwaj*</u> , Unnati, Varij Nayan, Sonali, Shiv Kumar Giri, Ram Avatar Legha, Yash Pal, BN Tripathi
2	Multivariate analysis using morphometric traits discriminates 14 Indian goat breeds/local populations II-007	<u>Dinesh Kumar Yadav*</u> , Naresh Kumar Verma, Satpal Dixit and R.A.K. Aggarwal
3	Genetic analysis of ovar-DQA locus across sheep breeds in India revealed its evolutionary importance and fitness of Indian sheep breeds in tropical climate II-021	<u>G. R. Gowane*</u> , Priya Sharma ¹ , Rajiv Kumar ² , S. S. Misra ² , Rani Alex ¹ , V. Vohra ¹ , ³ Gopal Dass, Ashish Chopra ⁴ , Yogesh Kandalkar ⁵ , Abhinav Choudhary ⁶ and Ankit Magotra ⁷
4	Gap filling in the animal breeding data base: comparing the efficiency of imputation methods and assessing the impact on genetic evaluation II-056	<u>Rani Alex*</u> , Ashwarya, Linda George, Gopal Gowane and Vikas Vohra
5	Effect of environmental temperature on metabolites in milk of Sahiwal cow II-064	<u>Richa Singh*</u> , Ravali Parvatam, Anusha Kishore
6	Polymorphism and divergence among Aseel, Vanaraja and Rajasri chicken breeds II-016	<u>G Rangasai Chandra</u> , R Vinoo, K Nagaraja Kumari, K Sudhakar and M Metta (Online)
7	Prediction of lifetime milk production in deoni cattle using early expressed traits II-063	<u>D. N. Das*</u> , T. Karuthadurai ² , Dipankar Paul ³ , Reshma Raj S ⁴ , Mukund A. Katakataware ⁵ , M. Sivaram ⁶ , M. Chauhan ⁷ And K.P. Ramesha (Online)
8	Generation-wise genetic evaluation of Ghungroo pig-most promising indigenous pig breed of India II-069	<u>Santanu Banik*</u> , Pranab Jyoti Das, Satish Kumar, Sunil Kumar, Rafiqul Islam, Keshab Barman, B.C. Das and V.K. Gupta (Online)

Brain Storming Session: “Breed Watch-list: Status and Way Forward”

(12:30 -1:30 PM; PG Nair Conference Hall)

Chairman : Dr V K Saxena, ADG (AP&B), ICAR

Panellists : Dr A E Nivasarkar, Dr B Prakash, Dr R S Gandhi, Dr D K Sadana, Dr PK Singh, Dr PK Rout, Dr M S Tantia, Dr RAK Aggarwal, Dr Umesh Singh, Dr S C Mehta, Dr GK Gaur, Dr Bharat Bhushan

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Rapporteur : Dr AK Mishra, Pri. Scientist, ICAR-NBAGR
Presentation on the theme : Dr. RK Pundir, Pri. Scientist, ICAR-NBAGR
LUNCH (1:30 - 2:30 PM, FOOD COURT)

Tech. Session III: Omics for diversity and enhanced productivity in livestock and poultry genetic resources (2:30 - 4:30 PM; PG Nair Conference Hall)

Co-chairs : Dr Abhijit Mitra, Director, ICAR-CIRC
Dr AK Rawat, Former Advisor, DBT
Rapporteurs : Dr Indrajit Ganguly, Pr Scientist, ICAR-NBAGR
Dr Gopal Gowane, Sr Scientist, ICAR-NDRI

Lead lectures (15 + 3 min)

- 1. Omics for animal diversity and population structure**
Sabyasachi Mukherjee, Anupama Mukherjee and Archana Verma
- 2. Genomics for improvement in livestock productivity (online)**
Gabor Meszaros
- 3. Genomics: approaches and applications in poultry production (online)**
T.K. Bhattacharya

Oral presentations: (5+2 min)

S.N.	Title	Author(s)
1	High accuracy of genotype imputation in Landlly pigs using informative low-density single nucleotide polymorphism panels III-007	<u>Snehasmita Panda*</u> , Amit Kumar, Gyanendra Kumar Gaur, Sheikh Firdous Ahmad Anuj Chauhan, Arnav Mehrotra, Triveni Dutt
2	Comparative transcriptomics of breast muscles from two divergent chicken breeds - Kadaknath and broiler III-019	<u>Sonika Ahlawat*</u> , Reena Aror, RK Viji ¹ , S.B Lal, D.C Mishra, Md. Samir Farooqi and Sudhir Srivastava
3	Genetic manipulation of buffalo genome using CRISPR technology III-036	Kamlesh Kumari Bajwa, Meeti Punetha, Sonu Bansa, Dharmendra Kumar, Prem Singh Yadav, <u>Naresh L. Selokar*</u>
4	Concurrent transcriptome and methylome study in pig breeds with different levels of muscularity reveals myogenesis pathways III-010	<u>Mohan.N.H.*</u> , Prajwalita Pathak, Lipika Buragohain, Juri Deka, Jaya Bharati, A. K. Das, R. Thomas, R. Singh, D. K. Sarma, V. K. Gupta and B. C. Das (Online)
5	Detection of genomic footprints in three Indian buffalo breeds using genome-wide SNP data III-031	Divya Rajawat, <u>Manjit Panigrahi*</u> , K.A. Saravanan, Harshit Kumar, Sonali Sonejita Nayak, Anuradha Panwar, Bharat Bhushan (Online)
6	'Omic' insights on infertility or subfertility of yak sperm III-035	<u>Aneet Kour*</u> , Pranab Jyoti Das, Dwijesh Chandra Mishra, JyotikaBhati, Martina Pukhrabam and Mihir Sarkar (Online)

Plenary & Valedictory Session

(4:30 - 5:30 PM; PG Nair Conference Hall)

Chief Guest : Dr ML Madan, Former DDG (AS), ICAR & Padmashree Awardee
Guests of Honor : Dr VK Saxena, Asst. Director General (AP&B), ICAR
: Dr Dheer Singh, Director (Acting), ICAR-NDRI

HIGH TEA (5:30 PM, FOOD COURT)

CONTACT POINTS

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