



SURAT KETERANGAN

Nomor : 1883/UN3.1.6/KP/2023

Yang bertanda tangan dibawah ini :

Nama : Prof. Dr. Mustofa Helmi Effendi, drh., DTAPH  
NIP : 196201151988031002  
Pangkat/Golongan : Pembina (Gol. IV/a)  
Jabatan : Wakil Dekan III

Dengan ini menerangkan bahwa :

Nama : Dr. Erma Safitri, drh., M.Si  
NIP : 196907231999032001  
Pangkat/Golongan : Penata Tk. I (Gol. III/d)  
Jabatan : Lektor

Telah melaksanakan penelitian dengan judul sebagai berikut :

No	Judul Karya Ilmiah	Tahun Pelaksanaan Penelitian
1	Immunomodulatory Activity of Black Jinten Oil ( <i>Nigella sativa</i> ) as Macrophage Activator for <i>Salmonella typhimurium</i> Infected Rat	2020
2	Screening the Reproductive Tract of Dairy Cattle for Pathogenic Micros	2019
3	Human Chorionic Gonadotropin (hCG) from Urine of Pregnant Women to Manipulate in vivo Ovulation and Pregnancy of Madura Cows	2019
4	Anti Early Embryonic Protein (EEP) for Pregnancy Test by Microtiter Strip in Dairy Cows	2019
5	The Effect of Feeding High Level of Protein on Reproductive Performance of Bali Starling.	2019
6	Antisperm Antibody in Repeat Breeder Friesian Holstein Cows at KPSP Setia Kawan Nongkojajar, Tutur District, Pasuruan, Indonesia.	2019
7	Diagnosis of Single and Twin Pregnancy, and Early Embryo Mortality Through Progesterone Level Test on Local Does.	2019
8	Improvement of Pregnancy Rate in Bali Cows with the Combination of Equine Chorionic Gonadotropine (eCG) from Local Pregnant Mare with PGF2 $\alpha$ .	2019
9	Progesterone Profile of Dairy Cows which Experienced the Failure of Pregnancy to Artificial Insemination (AI).	2019
10	Effect of Heat Shock Protein (HSP) in Post Thaw Baluran Bull Semen	2018
11	Potency of Mycotoxin Binders on MDA Level, Expressions of Caspase 9 and Caspase 3 in The Uterus of Mice Exposed to Zearalenone	2017



ASEAN  
University  
Network





# UNIVERSITAS AIRLANGGA

## FAKULTAS KEDOKTERAN HEWAN

Kampus C Mulyorejo Surabaya 60115 Telp. (031) 5992785, 5993016 Fax (031) 5993015

Laman: <http://www.fkh.unair.ac.id>, e-mail: [info@fkh.unair.ac.id](mailto:info@fkh.unair.ac.id)

12	Polymorphism of Growth Hormone Gene in The Artificial Insemination Result of Madura Cattle with Limousin Semen as a Reference for Genetic Selection	2018
13	Implementation of fotogrametry techniques as body mass estimation of indo-pacific bottle nose dolphin (Tursiops aduncus) in bali dolphin lodge	2020
14	Uji Sensitivitas Kebuntingan Sapi Perah Menggunakan Pregnancy Specific Protein B (PSPB) Microtiter Strip dan Progesteron sebagai Gold Standard	2007
15	Estimation of Equine Chorionic Gonadotropin (eCG) concentrate in the Blood Sera of Pregnant Mare	2014
16	Efek Pemberian L-Arginin Terhadap Gambaran Histologi Jumlah Spermatisit Primer pada Mencit (Mus musculus) Setelah Terpapar Suhu Panas	2019
17	Anti Prolactine Overcomes Heat Stress on Laying Hen.	2008
18	Unnatural Forced Moulting in The Laying Hen as Cause of Zoonosis from Salmonella Enteritidis	2009
19	Case Study: Dystocia on Beef Cattle in Kunir Regency of Lumajang District, East Java, Indonesia in 2015 and 2016	2017
20	Teratogenic Effect of Congenital Toxoplasmosis in Chicken Embryo	2017

Adapun penelitian tersebut layak dilakukan, meskipun belum ada **Ethical Clearence** karena menggunakan hewan coba yang minimal dan menghasilkan output yang sangat baik.

Demikian surat keterangan ini kami buat untuk dapat dipergunakan sebagai persyaratan pengusulan Jabatan Fungsional **Guru Besar**

Surabaya, 3 April 2023

Wakil Dekan III,

Prof. Dr. Mustofa Helmi Effendi, drh., DTAPH

NIP 196201151988031002



ASEAN  
University  
Network



# THE INDIAN VETERINARY JOURNAL

SINCE - 1924

**Journal of the  
INDIAN VETERINARY ASSOCIATION**  
ESTD - 1922                      Regd. No. Sl. No. 96/1967 (CHENNAI)



No. 11, Pasumpon Muthuramalinga Thevar Salai (Chamiers Road),  
Nandanam, Chennai - 600 035, Tamil Nadu, India  
Tel. : +91 44 2435 1006  
Email : [ivj83@yahoo.com](mailto:ivj83@yahoo.com)  
ONLINE : [www.ivj.org.in](http://www.ivj.org.in)

**THE INDIAN VETERINARY JOURNAL**  
(Official Organ of the Indian Veterinary Association)

**EDITORIAL COMMITTEE**

**Dr A.V. KRISHNAN, Chief Editor**

B.V.Sc., M.V.Sc (Path.)

Retd. Additional Director of A.H., TN

**Dr S. SUKUMAR, Managing Editor**

B.V.Sc., M.V.Sc (Vet. Micro), Ph.D. (Biotech)

Retd. Professor of Biotechnology, TANUVAS, TN

**Dr V. Titus George, Editor**

B.V.Sc., M.V.Sc., Ph.D. (Patho)

Retd. Prof. of Pathology, TANUVAS

**Dr I. Ponnu Pandian, Editor**

B.V.Sc., PGDAEM

**Dr K. Venukopalan, Editor**

B.V.Sc., M.V.Sc., Ph.D. (Poul.)

Retd. Prof. of Poultry Science, TANUVAS

**EDITORIAL BOARD**

**CHAIRMAN**

**Dr. Chirantan Kadian**

B.V.Sc & A.H.

**President, Indian Veterinary Association**

**MEMBERS**

**Prof. Dr C. Balachandran**

M.V.Sc, Ph.D., PGDAJ, PGDEVP, DICVP

FAO Fellow, FIAVP, FNAVS, FASAW

Vice-Chancellor

Tamilnadu Veterinary and Animal Sciences University

Madhavaram Milk Colony, Chennai - 600 051.

**Dr. P.K. Panwar**

BVSc & AH, MVSc,

Department of Animal Husbandry

Uttar Pradesh

**Dr. Subhash Chander Ahlawat**

BVSc & AH.

Department of Animal Husbandry

Haryana

**MANAGING COMMITTEE OF  
INDIAN VETERINARY ASSOCIATION**

**President :**

Dr. Chirantan Kadian

**Secretary General :**

Dr. R.S. Patel

**Treasurer :**

Dr. I. Ponnu Pandian

**Joint Secretary :**

Dr. M.K. Srikanth

**Vice Presidents :**

Dr. L. Chandrasekaran, HQ, Tamilnadu

Dr. Arun Sirkeck, Himachal Pradesh

Dr. S.G. Yalagod, Karnataka

Dr. Ilang, Nagaland

Dr. Ramji Lal Meena, Rajasthan

Dr. Sudhir Kumar, Uttar Pradesh

**Zonal Secretaries :**

Dr. Amit Nain, Punjab

Dr. R. Vasantha Rayalu, Andhra Pradesh

Dr. Bhuban Ch. Sarmah, Assam

Dr. Umesh Balaji Sontakke, Maharashtra

Dr. Pankaj Kumar, Jharkhand

**Managing Editor, IVJ :**

Dr. S. Sukumar, Tamil Nadu

# THE INDIAN VETERINARY JOURNAL

(Official organ of the Indian Veterinary Association)

Vol. 96

October 2019

No. 10

## CONTENTS

### GENERAL ARTICLES :

**Performance of “*Tanuvus Namakkal Gold Japanese Quail*” Fed Diet with Different Levels of Energy and Lysine**

K. Shibi Thomas, R. Amutha, M.R. Purushothaman, P.N. Richard Jagatheesan and S. Ezhil Valavan ... 09

**Supplementation of *Phaleria macrocarpa* Leaf Extract Significantly Reduced *E.Coli* Infection in Broiler**

Diyantoro and Siti Eliana Rochmi ... 12

**Drug-Drug Interactions and Prescribing Pattern in Veterinary Practice in Iraq**

Sarhan R. Sarhan, Hayfaa A. Moheisen, Elaph K. Kamel and Zahraa J. Mohammad ... 14

**A Case of Cranioschisis with Meningocele in a Large White Yorkshire Piglet**

E.Rachel Jemimah, S. Meenakshi Sundaram, A. Shanmuga sundaram, T. Muthuramalingam and R. Venkataramanan ... 18

**Antisperm Antibody in Repeat Breeder Friesian Holstein Cows at KPSP Setia Kawan Nongkojajar, Tutur District, Pasuruan, Indonesia**

FadilaZikri Amanda, Sri PantjaMadyawati, IsnainiFadilah and Erma Safitri ... 20

**Economics of Inclusion of Turmeric (*Curcuma longa*) and Ginger (*Zingiber officinale*) in Broiler Feeds**

S.A. Jadhav, S.M. Bhalerao, A.V. Khanvilkar, S.D. Changan and L.A. Pangaonkar ... 23

**Molecular Identification of Extended Spectrum Beta-Lactamase (ESBL) Producing**

***Escherichia coli* Isolated From Dairy Cows in East Java Province, Indonesia**

Akyun Rozaqi Syah Putra, Mustofa Helmi Effendi, Setiawan Koesdarto and Wiwiek Tyasningsih ... 26

**Acupuncture Could Increase Spermatogonic Cells in Albino Rats Exposed to Heat Stroke**

Muhammad Thohawi Elziyad Purnama, Imas Hapsari Rahmaningtyas, Ainun Septia Putri, Angela Swasti Ivana Lee, Fachrun Nisa Tatimma and Herlina Masyitoh ... 30

***Phaleria macrocarpa* (Scheff.) Boerl. Pulp Extract Increases the Sperm Characteristics in *Rattus norvegicus***

Amaq Fadholly, Arif N. M. Ansori, Annise Proboningrat, Muhammad K. J. Kusala, Naimah Putri, Soeharsono and Budi Utomo ... 32

**Red Dragon Fruit Peel (*Hylocereus polyrhizus*) in Rabbit Nutrition**

Ragil Angga Prastiya, Moh. Anam Al-Arif, Fachrun Nisa' Tatimma and Bodhi Agustono ... 36

**Eyelid Occlusion induced Form Deprivation Myopia (FDM) on Axial Length and Morphological Changes of the Sclera in Rabbits**

Rini Kusumawardhany, GatutSuhendro, Tjahjono D. Gondhowiardjo, Nurwasis, AtinaYustisia Lestari and LitaRakhmaYustinasari ... 38

**RUNX2 and SOX9 Expression on Chondrocyte Hypertrophy Formation in Post-Menopausal Osteoarthritis Mechanism (An Experimentation on Rat Model)**

Bimo Sasono, Heri Suroto, Dwikora N. Utomo, Aulani Am, Hari Basuki N, Damayanti Tinduh and Fedik A. Rantam ... 41

**Concentration of Microcystin in an Intensive Vannamei Farm at Banyuwangi, East Java Indonesia**

EndangDewi Masithah, Fitri Annisha and Agoes Soegianto ... 45



## CLINICAL AND FIELD ARTICLES :

<b>The Effect of Feeding High Level of Protein on Reproductive Performance of Bali Starling</b> Mas'ud Hariadi, Budi Utomo, Herry A. Hermadi, Rezha S.W. Hadi, Alfian Zulfahmi and Erma Safitri	... 48
<b>Management Very Large Urolith in Pomerian Dog - A Case Report</b> E. Erwin, E. Etriwati and D. Noviana	... 51
<b>Fusion Protein of Aminoacid Mutations in Newcastle Disease Isolated from Swan Goose Caused Resistance to Infection</b> Naimah Putri, Rahaju Ernawati, Suwarno, Jola Rahmahani and Fedik Abdul Rantam	... 53
<b>Post Coital Paraphimosis in a Chippiparai Dog</b> S.Kokila, M.Bharathidasan, A.Ganesan, S.Dharmaceelan, A.R.Ninu and D.Vishnugurubaran	... 56
<b>Prevalence of Ticks in Sheep and Goats in Perambalur District of Tamilnadu</b> P. Suresh Kumar	... 58
<b>The Antioxidant Activity of Pinus merkusii Ethanol Extract as Hepatoprotector in Mice</b> A.Herdiansyah, Rimayanti and S.A. Sudjarwo	... 60
<b>Medical Management of Cellulitis of Limb in a Mule</b> Aneesh. A and Nitin Sheoran	... 62
<b>Haemorrhagic Colitis Due to <i>Buxtonella Sulcata</i> and <i>E.Coli</i> in a Cross Bred Cow</b> S. Saravanan, T.Anna, K.K. Ponnu Swamy, P. A. Enbavelan, R.C. Sundararajan and R. Ramprabhu	... 65
<b>Surgical Management of Peribulbar Abscess in Indian Star Tortoise (<i>Geocheloneelegans</i>) – A Case Report</b> Vinny Anna Varghese, Shashi KantMahajan, VandanaSangwan and Kuldip Gupta	... 67
<b>Effective Clearance of Vermic Toxins by Haemodialyzer with Small Surface Area</b> M.Chandrasekar, M.Arthi, M.G.Jayathangaraj, Stella Esther and S.Nethaji	... 69
<b>Surgical Management of Uterine Rupture in a Bitch</b> G. Shanmuga Priya and M.G. Mohamed Ali	... 71
<b>Cestode Infection in a Free Ranging Indian Rock Python (<i>Python molurus</i>)</b> M.S. Sreelakshmi, Mammen J. Abraham, Ajith Jacob George and N.Divakaran Nair	... 73
<b>Management of Atopic Dermatitis in Dog</b> Steven Taufic Leo and LitaRakhmaYustinasari	... 74
<b>Intussusception and its Surgical Management Under General Anaestheisa in a Cow – A Case Report</b> S.Vigneshwaran, S. Senthilkumar, S. Dharmaceelan, S.Kathirvel, A. Kumaresan and K.Jayakumar	... 76
<b>Meloxicam Toxicity in Labrador Dog Due to Dispensing Error and its Reversal by Misoprostol</b> K. Kannan, M. Saravanan, P.K. Ram Kumar, T. Arul Kumar, S. Senthil Kumar and N. Premalatha	... 78
<b>Cost Effectiveness of Different Diet Fed to “Tanuvas Namakkal Gold Japanese Quail”</b> K. Shibi Thomas, R. Amutha, M.R. Purushothaman, P.N. Richard Jagatheesan and S. Ezhil Valavan	... 81
<b><i>Hymenolepis lanceolata</i> in a Duck from Cauvery Delta Region</b> M.K. Vijayarathi and A. Meenakshisundaram	... 84
<b>Enhancement of Biohydrogen Production from Cattle Rumen Fluid by Optimization of Micronutrients</b> Merli Maman, S. Meignanalakshmi, K.Vijayarani, H. Gopi and S. Meenakshi Sundaram	... 85

## Author and Subject Index

89 & 90

## The Effect of Feeding High Level of Protein on Reproductive Performance of Bali Starling

Mas'ud Hariadi, Budi Utomo, Herry A. Hermadi, Rezha S.W. Hadi, Alfian Zulfahmi and Erma Safitri<sup>1</sup>

Faculty of Veterinary Medicine, Universitas Airlangga, Surabaya 60115, Indonesia.

(Received : April, 2019 157/19 Accepted : May, 2019)

### Abstract

Bali Starling naturally found in the western part of Bali Island, is a critically endangered species. The research aim was to improve their reproductive performance of egg production and hatchability by feeding various levels of protein. Twelve pairs of Bali starling were divided into 4 treatment groups i.e C (control, commercial feed); T1 (protein 17%); T2 (protein 18%); T3 (protein 19%). Feed were made from combinations of *Gryllus mitratus*, *Oecophylla smaragdina*'s egg, *Musa acuminata* balbisiana, Zea maize, *Arachis Hypogaea*, *Glycine max*, *Vigna radiata* and fish powder. The result showed T3: 19% protein had better result for egg production and hatchability.

**Key words** : Bali starling, Fertility, Hatchability, Reproductive performance.

Bali Starling (*Leucopsar rothschildi*) is a bird that is very popular among the people because of the beauty of its physical form and brilliant blue eye frame. It was estimated that the population of around 300-900 birds in the wild in 1990 due to predators, the number decreased. Although as many as 126 birds have been released in the Bali Barat National Park on 2011, their survival was not monitored (Collar *et al.*, 2012). This species has been the focus of much conservation effort and protected under Indonesian law since 1970 (Jepson, 2016).

### Materials and Methods

Twelve pairs of Bali Starlings used in the experiment were divided into three treatment using on protein content of 17% (T1), 18% (T2) and 19% (T3), prepared by using different feed ingredients using a combined method of trial and error

and the Pearson square method to obtain protein content. In control treatment using commercial bird feed (C). The feed ingredients that were used as feed are analyzed for protein content at the Laboratory of Animal Food Sciences, Faculty of Veterinary Medicine, Airlangga University using the Kjeldhal method. All the treatment were fed 2 times a day, morning and evening in cages. It was observed the mating speed and eggs yield have increased (Hasib *et al.*, 2017). The eggs were incubated for 14 days. Data analysis was done for hatchability of egg.

### Results and Discussion

Nutrient contents of feed ingredients was summarized in Table I. The results of the proximate analysis conducted at the Laboratory of Animal Food Sciences, Faculty of Veterinary Medicine, Airlangga University, Surabaya.

From the results of the proximate analysis, the material was mixed using Pearson square method to obtain the expected protein levels as listed in Table II.

The results of research conducted from August to December 2014 at the Safari Bird farm in Kudu village, Kertosono Subdistrict, Nganjuk Regency, East Java, are presented in table III.

The treatment T3 has revealed better fertility in all the replicates, however the embryonic mortality was high in the two replicates of two each. The third replicate has yielded successful hatch all the three eggs set (100%). The hatchability in the other two replicates of T3 were only 33.3%. The all other treatment groups did not produce success in fertility or hatchability. The eggs from the other treatment groups had low fertility and higher embryonic

<sup>1</sup>Corresponding author : Email : rma\_fispro@yahoo.com

**Table I.** Nutrient content of feed ingredients and compounded feed.

Raw Material	Nutrition (%)							
	Dry Matter (%)	Abu	Crude Protein	Crude Fatty	Crude Fiber	Ca	BETN	ME (Kcal/kg)
Compounded Feed	93.092	9.476	16.375	6.140	10.135	1.905	50.967	2886.693
Kroto	24.892	0.883	14.670	2.560	3.697	0.190	3.083	795.463
Crickets	26.257	1.280	16.283	3.857	4.828	0.591	0.406	846.792
Banana	41.774	0.926	3.554	14.787	2.266	0.712	20.241	1932.645
Corn	88.166	1.578	10.765	2.503	3.442	0.012	69.879	3117.61
Peanuts	92.277	2.174	26.300	12.990	12.727	0.681	38.086	3242.91
Green beans	92.373	3.365	23.453	3.451	4.932	0.183	57.172	3144.90
Soybeans	90.057	4.458	30.702	9.550	11.450	0.385	33.896	2984.92
Fish flour	-	-	44.754	-	-	-	-	-

Source : Laboratory of Animal Food, Faculty of Veterinary Medicine, Airlangga University

**Table II.** Feed composition of experimental rations / kg of feed

Material	C	T1	T2	T3
	(Control)	17%	18%	19%
Comercial bird feed	100	-	-	-
Crickets	-	2	2	2
Kroto	-	2	2	2
Banana	-	5	5	5
Fish flour	-	5	5	5
Peanuts	-	5	5	5
Green beans	-	10	10	10
Soybeans	-	14	19	23
Corn	-	57	52	48

Description: Per kg of ration plus 0.06 grams Introvit 4+ ws as a source of vitamins, minerals and amino acids

mortality.

The results obtained in this study were not significantly different of Balen *et al.* (2000). In the process of preserving the Bali Starling, the number of eggs produced is not only important, but also they should be fertile to preserve the Bali Starlings. The third treatment replicate the one had the highest fertility percentage with all the eggs hatched. In the control treatment, the production was 0 due to the fact that their feed does not have enough protein to support the egg production and fertility like might be the reasons.

There are several factors unsuccess-

ful mating any immature sperm. Williams and Feistner (2006) states that egg fertility is influenced by sperm quality, parent age, their nutritional status, mating time, male-female ratio. Feed plays an important role in their production of eggs (Prasetyo and Safitri, 2016) and also for fertility and successful rearing of young ones. Dietary deficiencies (nutrition) can result in decreased sperm production, fertility and embryonic death (Safitri *et al.*, 2016).

In hatchability study, The third treatment had an average value of 55.5%. All eggs on third treatment were fertile but some failed to hatch due to environmental factors and the lack of parental care, like cracks in the shells



Tabel III. Production and Hatchability of Bali Starling Eggs

Treatment	Cage	Egg production	Fertility	Mortality	Hatch	Hatchability
C (Control)	52	0	-	-	-	-
	54	0	-	-	-	-
	63	0	-	-	-	-
T1	55	3	-	-	-	-
	60	2	-	-	-	-
	62	2	-	-	-	-
T2	53	2	-	-	-	-
	57	3	1	1	-	0%
	63	4	2	2	-	0%
T3	58	3	3	2	1	33.3 %
	59	3	3	2	1	33.3 %
	61	3	3	0	3	100 %

resulting poor hatchability

The egg quality increased with increasing protein level (Shell thickness, Haugh Unit and egg yolk weight percentage). Large eggs and thick shells will result in lower egg shrinkage during hatching so that they can increase hatchability. Thin shells with low Haugh Unit result in decreased hatchability. Similarly egg shells and egg yolks are a source of material for embryo development, so increasing egg shell thickness and percentage of egg yolk will have a bearing on the hatchability (North and Bell, 1990).

The second treatment had a hatchability of 0% even though there were sufficient number of eggs, there was high embryonic mortality due to nutritional deficiencies.

### Summary

Rations with 19% protein produced more the number of egg Bali Starling and have high fertility, all the eggs produced were fertile and hatched, besides feed the climate and the level of parental care can also affect hatchability.

### References

Balen, I., Wayan, A., Dirgayusa, I., Made, W., Putra, A. and Herbert, H.T. (2000) Status and distribution of the endemic

Bali starling *Leucopsar rothschildi*. *Oryx*. **34(3)**: 188-197.

Collar, N.J., Gardner, L., Jeggo, D.F., Marcordes, B., Owen, A., Pagel, T., Vaidl, A., Wilkinson, R. and Wirth, R. (2012) Conservation breeding and the most threatened birds in Asia. *Birding ASIA*. **18**: 50-57.

Hasib, A., Muhamad, R., Reksa, T.Y., Artha, A.U. and Safitri, E. (2017) Utilization of Sumbawa tropical forest honey *Apis dorsata* to improve fertility of Indonesia Oriental Magpie Robin (*Copsychus saularis*) as effort animal population increase-ment. VMIC. The Veterinary Medicine International Conference. DOI 10.18502/kls.v3i6.1190. **2017**: 620-626.

Jepson, P.R. (2016) Saving a species threatened by trade: A network study of Bali starling *Leucopsar rothschildi* conservation. *Oryx*. **50(3)**: 480-488.

North, M.O. and Bell, D.D. (1990) Commercial Chicken Production Manual. Avi Book, Nostrand Reinhold, New York. 4th Ed. pp 115-131.

Prasetyo, R.H. and Safitri, E. (2016) Effects of honey to mobilize endogenous stem cells in efforts intestinal and ovarian tissue regeneration in rats with protein energy malnutrition. *Asian Pac J Rep*. **5(3)**: 198-203.

Safitri, E., Utama, S., Widiyatno, T.V., Sandhika, W. and Prasetyo, R.H. (2016) Auto-regeneration of mice testicle seminiferous tubules due to malnutrition based on stem cells mobilization using honey. *Asian Pac J Rep*. **5(1)**: 31-35

Williams, T.M. and Feistner, A.T.C. (2006) Reproduction of Bali starlings (*Leucopsar rothschildi*) at Durrell Wildlife Conservation Trust, Jersey. *Int Zoo Yearbook*. **40(1)**: 271-289.

## AUTHOR INDEX

Agoes Soegianto,	45	Hari Basuki N,	41	Rachel Jemimah, E.	18
Ainun Septia Putri,	30	Hayfaa A. Moheisen,	14	Ragil Angga Prastiya,	36
Ajith Jacob George,	73	Herdiansyah, A.	60	Rahaju Ernawati,	53
Akyun Rozaqi Syah Putra,	26	Heri Suroto,	41	Ram Kumar, P.K.	78
Alfian Zulfahmi,	48	Herlina Masyitoh,	30	Ramprabhu, R.	65
Amaq Fadholly,	32	Herry A. Hermadi,	48	Rezha S.W. Hadi,	48
Amutha, R.	09, 81	Imas Hapsari Rahمانingtyas,	30	Richard Jagatheesan, P.N.	09, 81
Aneesh. A	62	IsnainiFadilah,	20	Rimayanti,	60
Angela Swasti Ivana Lee,	30	Jadhav, S.A.	23	Rini Kusumawardhany,	38
Anna, T.	65	Jayakumar, K.	76	Saravanan, M.	78
Annise Proboningrat,	32	Jayathangaraj, M.G.	69	Saravanan, S.	65
Arif N. M. Ansori,	32	Jola Rahmahani,	53	Sarhan R. Sarhan,	14
Arthi, M.	69	Kannan, K.	78	Senthil Kumar, S.	78
Arul Kumar, T.	78	Kathirvel, S.	76	Senthilkumar, S.	76
AtinaYustisia Lestari,	38	Khanvilkar, A.V.	23	Setiawan Koesdarto,	26
Aulani Am,	41	Kokila, S.	56	Shanmuga Priya, G.	71
Bhalerao, S.M.	23	Kuldip Gupta,	67	Shanmuga sundaram, A.	18
Bharathidasan, M.	56	Kumaresan, A.	76	Shashi KantMahajan,	67
Bimo Sasono,	41	LitaRakhmaYustinasari,	38, 74	Shibi Thomas, K.	09, 81
Bodhi Agustono,	36	Mammen J. Abraham,	73	Siti Eliana Rochmi,	12
Budi Utomo,	32, 48	Mas'ud Hariadi,	48	Soeharsono,	32
Chandrasekar, M.	69	Meenakshi Sundaram, S.	18,85	Sreelakshmi, M.S.	73
Changan, S.D.	23	Meenakshisundaram, A.	84	Sri PantjaMadyawati,	20
Damayanti Tinduh,	41	Meignanalakshmi, S.	85	Stella Esther,	69
Dharmaceelan, S.	56, 76	Merli Maman,	85	Steven Taufic Leo,	74
Divakaran Nair, N.	73	Moh. Anam Al-Arif,	36	Sudjarwo, S.A.	60
Diyantoro,	12	Mohamed Ali, M.G.	71	Sundararajan, R.C.	65
Dwikora N. Utomo,	41	Muhammad K. J. Kusala,	32	Suresh Kumar, P.	58
Elaph K. Kamel	14	Muhammad Thohawi Elziyad		Suwarno,	53
Enbavelan, P.A.	65	Purnama,	30	Tjahjono D. Gondhowiardjo,	38
EndangDewi Masithah,	45	Mustofa Helmi Effendi,	26	VandanaSangwan,	67
Erma Safitri,	20, 48	Muthuramalingam, T.	18	Venkataramanan, R	18
Erwin, E.	51	Naimah Putri,	32, 53	Vigneshwaran, S.	76
Etriwati, E.	51	Nethaji, S.	69	Vijayarani, K.	85
Ezhil Valavan, S.	09, 81	Ninu, A.R.	56	Vijayasarithi, M.K.	84
Fachrun Nisa Tatimma,	30, 36	Nitin Sheoran,	62	Vinny Anna Varghese,	67
FadilaZikri Amanda,	20	Noviana, D.	51	Vishnugurubaran, D.	56
Fedik A. Rantam,	41, 53	Nurwasis,	38	Wiwiek Tyasningsih,	26
Fitri Annisha,	45	Pangaonkar, L.A.	23	Zahraa J. Mohammad,	14
Ganesan, A.	56	Ponnu Swamy, K.K.	65		
GatutSuhendro,	38	Premalatha, N.	78		
Gopi, H.	85	Purushothaman, M.R.	09, 81		

# THE INDIAN VETERINARY JOURNAL

Vol. 96

October 2019

No. 10

## SUBJECT INDEX

<b>Bacteriology and Microbiology</b>		Cestode Infection in a Free Ranging Python...	73
<i>Phaleria macrocarpa</i> Leaf Extract...	12	<i>Hymenolepis lanceolata</i> in a Duck...	84
Molecular Identification of Extended Spectrum...	26		
Newcastle Disease Isolated from Swan Goose...	53	<b>Pharmacology and Toxicology</b>	
Haemorrhagic Colitis Due to <i>Buxtonella Sulcata</i> ...	65	Pinus merkusii Ethanol Extract as Hepatoprotector in...	60
<b>Cattle and Buffaloes</b>		<b>Piggery and Poultry Science</b>	
Antisperm Antibody in Repeat Breeder...	20	Different Levels of Energy and Lysine...	09
Intussusception and its Surgical Management...	76	<i>Phaleria macrocarpa</i> Leaf Extract...	12
Biohydrogen Production from Cattle...	85	High Level of Protein on Reproductive...	48
		Cost Effectiveness of Different Diet Fed to...	81
<b>Canines, Equines and Felines</b>		<i>Hymenolepis lanceolata</i> in a Duck...	84
Medical Management of Cellulitis of Limb in a Mule...	62		
		<b>Surgery</b>	
<b>Fisheries</b>		Drug-Drug Interactions and Prescribing...	14
Microcystin in an Intensive Vannamei...	45	Cranioschisis with Meningocele in a Large White...	18
		Antisperm Antibody in Repeat Breeder...	20
<b>Goats and Sheep</b>		Molecular Identification of Extended Spectrum...	26
Prevalence of Ticks in Sheep and Goats...	58	Acupuncture Could Increase Spermatogonic Cells...	30
		Pulp Extract Increases the Sperm Characteristics...	32
<b>Laboratory Animals</b>		Expression on Chondrocyte Hypertrophy Formation in...	41
Red Dragon Fruit Peel in Rabbit Nutrition...	36	Very Large Urolith in Pomerian Dog...	51
Eyelid Occlusion induced Form Deprivation Myopia...	38	Post Coital Paraphimosis in a Chippiparai Dog...	56
Expression on Chondrocyte Hypertrophy Formation in...	41	Pinus merkusii Ethanol Extract as Hepatoprotector...	60
		Medical Management of Cellulitis of Limb in a Mule...	62
<b>Nutrition</b>		Haemorrhagic Colitis Due to <i>Buxtonella Sulcata</i> ...	65
Different Levels of Energy and Lysine...	09	Peribulbar Abscess in Indian Star Tortoise...	67
Economics of Inclusion of Turmeric and Ginger...	23	Effective Clearance of Vermic Toxins by...	69
Red Dragon Fruit Peel in Rabbit Nutrition...	36	Uterine Rupture in a Bitch...	71
High Level of Protein on Reproductive...	48	Atopic Dermatitis in Dog...	74
Cost Effectiveness of Different Diet Fed to...	81	Intussusception and its Surgical Management...	76
		Meloxicam Toxicity in Labrador Dog Due to...	78
<b>Pathology and Parasitology</b>			
Cranioschisis with Meningocele in a Large White...	18	<b>Wildlife Science</b>	
Eyelid Occlusion induced Form Deprivation Myopia...	38	Peribulbar Abscess in Indian Star Tortoise...	67
Very Large Urolith in Pomerian Dog...	51	Cestode Infection in a Free Ranging Python...	73
Prevalence of Ticks in Sheep and Goats...	58		

## REVISED GUIDELINES TO AUTHORS

1. **THE INDIAN VETERINARY JOURNAL** (Official organ of the Indian Veterinary Association) publishes papers of original work as full papers, clinical articles and short communications on Veterinary, Animal Husbandry and Fishery Sciences. It also serves as a medium of news regarding the veterinary profession and deals with issues of professional importance from time to time through its editorial columns.
2. **Manuscripts are accepted for publication on the clear understanding that :**
  - a) They have neither been published nor been sent for publication elsewhere. All the authors should sign a certificate to this effect in respect of each manuscript sent for publication. Names, qualifications, full addresses and Email ID of all authors must be provided while submitting the manuscripts. Details of the corresponding author with contact phone and the address of the place with PIN code where the work has been carried out must be clearly mentioned.
  - b) The research work has been carried out with the approval of the Institutional Ethics Committee as per the laws in force in the country in which it has been conducted. A certificate to this effect should be signed by all authors. The authors should get written permission from concerned authorities for publishing manuscripts on emerging and exotic diseases.
  - c) All authors are jointly and severally responsible to the various authorities for the contents of the manuscripts. The Editorial Committee shall not be held responsible in any manner whatsoever to the contents of the manuscript and the views and interpretations expressed by the authors in the manuscripts. All disputes regarding any legal proceeding pertaining to the journal shall be within the jurisdiction of the High Court of Judicature at Chennai.
3. **A processing fee of each ₹. 200/- for Indian and US\$ 20 for foreign manuscript** must be sent along with the manuscript in the form of a DD or International Cheque drawn in favour of **The Editor, Indian Veterinary Journal, payable at Chennai. Payment of processing fee will not ensure publication of the manuscript.** On acceptance of the manuscript for publication, a Publication Charge (₹. 700/- for an Indian manuscript and US\$ 200 for a foreign manuscript) must be sent to The Editor.
4. It is mandatory that each Indian author should be a subscriber to the **print or online version** and a foreign author, to the online version of the Journal. The annual subscription fee is ₹. 700/- for the Indian subscriber and US\$ 200 for the foreign subscriber for the **print or online version** of the Journal.
5. Manuscript should be typed in A 4 size paper in double space with 12 pt size Times Roman font as per the Indian Veterinary Journal format. Only two hard copies must be sent to **the Editor, Indian Veterinary Journal, 11/7, Pasumpon Muthuramalinga Thevar Road (Chamlers Road), Nandanam, Chennai – 600035, India.** Clear prints of figures and photographs in duplicate if any must be sent in glossy print of maxi size. The full postal address with posted pin code of the actual place where the work was carried out, along with the contact phone number of the corresponding author should be provided below the names of author(s) in the articles submitted.
6. **The decision of the Editor is final in all matters pertaining to the publication of the manuscripts.** Editor has the right to do editorial revision of the accepted manuscripts, restriction of number of pages, tables and figures. No reason shall be given for the non-acceptance of the manuscript. Manuscript once received will not be returned to the author under any circumstances. The copy right shall rest with the Journal and no part of any manuscript shall be reproduced without specific permission of the Editor.
7. Each manuscript received will be allotted a **Registration Number**. The authors, while sending the revised version of the manuscript based on the comments of the referee, should submit the revised manuscripts in two forms, one hard copy and other one soft copy in CD. This should be as per IVJ format and return the original version along with original comments to the Editor for reference and records. The revised manuscripts should be submitted to the IVJ office within 90 days of receipt, failing which the article will not be considered for publication. A demand letter will be sent to the corresponding author for payments such as processing fee (if not already paid), publication charges and arrears of subscription fees. **Only on receipt of full clearance of all the payments and the soft copy in CD, the concerned article will be taken up for publication** and the author will be informed accordingly.
8. After publication of an article the original / revised copy of the article will be retained at the IVJ office only for a period of 12 months after which the article will be disposed off, since the published version will be available in print and digitized form.
9. **Indian Veterinary Journal Format:**
  - a) Title; Author(s); Place of work with full address and pin code.
  - b) **Full papers:** Abstract (not more than 100 words), Keywords (not more than 4 words), Introduction (with no subtitle), Materials and Methods, Results and Discussions, Summary, Acknowledgement (optional) and References (not exceeding 15). The full papers should not exceed 4 printed pages.
  - c) **Clinical articles :** Abstract (not more than 100 words), Keywords (not more than 4 words), Introduction (with no subtitle), Case History and Observations, Treatment and Discussion, Summary, Acknowledgement (optional) and References (not exceeding 15). The Clinical articles should not exceed 3 printed pages.
  - d) **Short Communications:** There is no specific format for Short Communication. Articles which do not comply to either Full Papers or Clinical Articles either on quality basis or on page-wise basis will be allotted under Short Communication.
  - e) The page limits are inclusive of figures, photographs and tables.
  - f) All tables should be numbered with upper case roman numerals (I, II...) and all figures should be numbered with arabic numerals (1, 2, 3...).
9. **Citing references:** In the text, references should be cited by names of the authors followed by the year of publication in parenthesis. In case of more than two authors, the name of the first author must be followed by *et al.* For the references repeated in the text, the year must be replaced by *loc cit.* in successive references. At the end of the text, the references must be furnished in alphabetical order. Each author's name must be followed by initials. Before the name of the last author, the word 'and' must be included. The year of publication must be in parenthesis. The title of the referred article must be given in full. The Journal's name must be in approved abbreviated form and must be in italics. The volume number of the journal must be given in bold letters. It should be followed by a colon and the starting and ending page numbers. While citing books, the Title of the book, Year, Publisher, Place of Publication, Number of the Edition and the relevant page number(s) must be provided. Website, 'in press' and 'personal communication' should be avoided as references.
10. All correspondence regarding the status of the articles must be made with The Editor, Indian Veterinary Journal at the Official Address of the Journal.

## INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Krishi Bhawan, New Delhi - 110 001

### ICAR Awards - 2019

The Indian Council of Agricultural Research, New Delhi announces the following ICAR Awards

- Sardar Patel Outstanding ICAR Institution Award 2019
- Chaudhary Devi Lal Outstanding All India Coordinated Research Project Award 2019
- Pandit Deen Dayal Upadhyay Krishi Vigyan Protshahan Puraskar (National & Zonal) 2019
- Atal Bihari Vajpayee ICAR Challenge Award 2019
- Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences 2019
- Jawaharlal Nehru Award for P.G. Outstanding Doctoral Thesis Research in Agricultural and Allied Sciences 2019
- Panjabrao Deshmukh Outstanding Woman Scientist Award 2019
- Vasantrao Naik Award for Outstanding Research Application in Dry Land Farming Systems 2019
- Bharat Ratna Dr C. Subramaniam Award for Outstanding Teachers 2019
- Lal Bahadur Shastri Outstanding Young Scientist Award 2019
- Swami Sahajanand Saraswati Outstanding Extension Scientist Award 2019
- NASI-ICAR Award For Innovation and Research on Farm Implements 2019
- Fakhruddin Ali Ahmed Award for Outstanding Research in Tribal Farming Systems 2019
- Dr Rajendra Prasad Puruskar for technical books in Hindi in Agricultural and Allied Sciences 2019
- Nanaji Deshmukh ICAR Award for Outstanding Interdisciplinary Team Research in Agricultural and Allied Sciences 2019
- Chaudhary Charan Singh Award for Excellence in Journalism in Agricultural Research and Development 2019
- Jagjivan Ram Abhinav Kisan Puruskar /Jagjivan Ram Innovative Farmer Award (National/Zonal) 2019
- N.G. Ranga Farmer Award for Diversified Agriculture 2019
- Pandit Deen Dayal Upadhyay Antyodaya Krishi Puruskar 2019 (National & Zonal)
- Haldhar Organic Farmer Award 2019
- ICAR - Cash Awards, 2019

The prescribed eligibility criteria, the guidelines and the pro-forma for applying for these awards may be downloaded from the ICAR's website ([www.icar.org.in](http://www.icar.org.in)). The applicants are required to submit their application in PDF format (in concise form not exceeding 30 pages- highlighting the significant achievements, citation (where applicable) awards/recognitions earned and other important details as required as per the application format) on our dedicated ICAR Award email : ([icar-award2018@gov.in](mailto:icar-award2018@gov.in)). In addition, **two hard copies** of the application form may also be submitted. In case of farmer applicants, not able to submit the applications electronically, may submit **two copies** of applications duly forwarded and recommended by the appropriate forwarding / nominating authority. The application(s) with complete documents sent through email, duly forwarded and recommended by the appropriate authority should be sent to **Dr. Shiv Prasad Kimothi, Assistant Director General (Coordination), ICAR, Room No. 204A, Krishi Bhawan, Dr.Rajendra Prasad Road, New Delhi-110 001** so as to reach him on or before **31.12.2019**. The last date for receiving the hard copy of applications duly forwarded and recommended by the appropriate authority for applicants in the Andaman and Nicobar Islands, Lakshadweep, States/Union Territory in the North Eastern Region, Ladakh Division of J&K State and Sikkim is **15.01.2020**. **The candidates should also clearly mention their contact details (mobile No. and e-mail) along with Bank Account No., Bank Address, IFSC Code and PAN No and attach a copy of cancelled cheque.** The Council will retain the award winning applications/thesis for the record.

Each candidate will be judged on the basis of the originality and/or the applied value of the research work / investigations as revealed in the documents submitted by him/her/them. **In all matters relating to the award, the decision of the Council shall be final and no correspondence on this account will be entertained.** For details visit : <http://www.icar.org.in/>.