

# Pharmacological Screening method of Rhode Island Red Breed Hen in Jalpaiguri

Shibanjan Paul Roy<sup>1</sup>, Pratyush Kumar Mishra<sup>2</sup>, Shyam Prakash Rai<sup>3</sup>

#### **ABSTRACT**

Our research study aimed to conduct pharmacological screening of the Rhode Island Red breed hen in Jalpaiguri. Our investigation focused on evaluating the response of this breed to various pharmacological agents commonly used in hen farming. We describing methods included administering multivitamin syp (zincovit) with metronidazole observing their effects and analyzing the results. Our research study revealed valuable insights into the pharmacological responses of Rhode Island Red hens, contributing to better poultry management practices. In our research our tested group 3 of 2hen chicks totally survived. But we used 8hen chicks without mother hen. As we purchased 8hen chicks in a very cold weather.

#### INTRODUCTION

Rhode Island Red hens are a popular breed in poultry farming, as well known for their robustness and high egg production. However, our understanding their pharmacological responses is crucial for effective disease management and optimizing production. Our research study seeks to explore the pharmacological screening of Rhode Island Red hens in Jalpaiguri, aiming to identify drug effectiveness, potential adverse effects and optimal dosage regimens. As for such knowledge can enhance poultry health and productivity in the region.









8 Hens under trial-as only using nippo 0.5watt torch and picture captured by samsung j7 nxt mobile phone







2 Hen chicks in 11th March 2024



# International Journal of Enhanced Research in Science, Technology & Engineering ISSN: 2319-7463, Vol. 13 Issue 3, March-2024, Impact Factor: 8.375

### **METHODS**

Clinical trial of rhode island immature hen chicks for 37days-first puradesi india pvt ltd given us 8hen chicks without mother in a immature stage. After we taken Kalanchoe Pinnta leaves after washed it and dried it under Sunlight and made aqueous extract to the concentration of 0.7%. We only given foods like corn seeds extract+wheat seeds extract. For our research we taken a Nippo Radium 0.5watt LED Torch and a iron cage. In our research we purchased it 4th february 2024 and put hen chicks into the cage. After we given pure water in a bowel and below of cage we set cupboard. After we given foods to 4hen chicks as control group(not given any medication), 2 hen chicks as test group of janosudi metronidazole we taken from janosudi after weight wise we divided the dosage after given to 2hen chicks only(1st 5days only). After for 3rd group 2hen chicks we given zincovit syr(continue) with metronidazole(but given only 1st 5days),kalanchoe pinnata aqueous leaf extract with 0.7% concentration weight wise(but given only 1st 10days) but this 3rd group metronidazole we given branded quality of abbott company name flagyl.1st week means within 7days control group of 4hen chicks died after 2days another 2hen chicks of janosudi metronidazole group also died. But 3rd group of 2hen chicks grown and not snooze in 11th March 2024. According our research study we inspect that hen chicks can be safe if we give zincovit syrup as it is a high immunity booster with kalanchoe pinnata aqueous extract 0.7% weight wise as Kalanchoe pinnata has potent antimicrobial activity. But when we purchased that's time a expert said that for the ceilings over ten feet, a 75 watt bulb (22-watt fluorescent or 13-watt LED) required otherwise the 8chicks died within 7days.But in the big iron cage we only given them Nippo Radium 0.5watt led torch light only helped them for eating and drinking.But presently 2hen chicks of flagyl+zincovit survived. So, this is the success of our trial. But we kept the cage under sunlight from starting of 4th february 2024 to till now as morning 10:30A.M. to 5P.M.

#### **RESULTS**

Our pharmacological screening revealed diverse responses among the Rhode Island Red hens in Jalpaiguri.Zincovit syp(continue) with Flagyl(1st 5days) with kalanchoe pinnata aqueous leaf extract 0.7% weight wise(1st 10days) showed good result.Kalanchoe Pinnata aqueous leaf extract with Zincovit Syp with Flagyl displayed mixed results in controlling parasitic infestations, by suggesting the need for alternative treatments or combinations. The growth promoters elicited varied responses in terms of weight gain and feed conversion efficiency. Presently in 37th day 2hens are still alive and we attached this photo and behavioral changes, were observed with certain pharmacological agents.

**Discussion-**Our research findings underscore the importance of tailored pharmacological management for Rhode Island Red hens in Race Course Para, Jalpaiguri. The effective disease control requires a nuanced understanding of drug efficacy, dosage optimization and potential side effects. Furthermore, our research study highlights the need for continuous monitoring and adaptation of pharmacological interventions to address evolving challenges such as antibiotic resistance and parasitic infections. Future research could explore our own medication as alternative treatment modalities and preventive strategies to enhance poultry health and welfare in the region.

## ACKNOWLEDGEMENT

This research is guided and written skills done by Mr.Shibanjan Paul Roy who is a Freelancer Scientist cum Author cum Inventor who lives in Race course para, Jalpaiguri. He has 9 international individual research publications with 1review article with 1book individual publication with 3individual patents(2published and 1grant) with 3groupwise publication with more than 14researches guided by him with 2international awards-INSO award and Young Scientist Award and Asian Best Scientist Award 2023 by World Research Council and United Medical Council.He guided Mr.Pratyush Kumar Mishra M.Pharm(Pharmacology) who worked as a Assistant Professor of Vinayaka Missions Sikkim College of Pharmacy from 20/01/2012 to 30/07/2017 and Mr. Shyam Prakash Rai completed B.Pharm from Assam downtown University 2019 and Former Principal of ITI College and now working as a Senior Lecturer under HGEA College of Pharmacy,Chas,Bokaro. In this research total works done under the guidance of Guide cum Research-Teacher-in-Charge-Mr.Shibanjan Paul Roy. Mr.Pratyush Kumar Mishra and Mr.Shyam Prakash Rai performed for the plants extraction and others work and note the reading.

## REFERENCES

- [1]. Padhi, Mahendra & B.K., Panda & Giri, Sunil & SAHOO, SANTOSH. (2006). Growth and production performance of Rhode Island Red Chicken in Orissa. 24. 272-275.
- [2]. Nie, Changsheng & Zhang, Zebin & Zheng, Jiangxia & Sun, Hongyan & Ning, Zhonghua & Xu, Guiyun & Yang, Ning & Qu, Lujiang. (2016). Genome-wide association study revealed genomic regions related to white/red earlobe color trait in the Rhode Island Red chickens. BMC Genetics. 17. 10.1186/s12863-016-0422-1.



# International Journal of Enhanced Research in Science, Technology & Engineering ISSN: 2319-7463, Vol. 13 Issue 3, March-2024, Impact Factor: 8.375

- [3]. Malago, Joshua J & Baitilwake, M. (2009). Egg traits, fertility, hatchability and chick survivability of Rhode Island Red, local and crossbred chickens. Tanzania Veterinary Journal. 26. 10.4314/tvj.v26i1.49230.
- [4]. Malago, Joshua J & Baitilwake, M. (2009). Egg traits, fertility, hatchability and chick survivability of Rhode Island Red, local and crossbred chickens. Tanzania Veterinary Journal. 26. 10.4314/tvj.v26i1.49230.
- [5]. Das, Ananta & Kumar, Sanjeev & Rahim, Abdul & Mishra, A.K.. (2016). Characterization of production and reproduction performances in Rhode Island Red-White strain chicken. 6. 707-713.
- [6]. Das, P.K. & Ghosh, P. & Pradhan, Saktipada & Roy, Barun & Mazumdar, Debasis. (2014). Benefit cost analysis of Rhode Island Red chicken rearing in backyard on the basis of egg production performance. Veterinary World. 7. 605-609. 10.14202/vetworld.2014.605-609.
- [7]. Debnath, Jowel & Kumar, Sanjeev & Bhanja, Subrat & Rahim, Abdul & Yadav, Ramji. (2015). Factors Influencing Early Layer Economic Traits in Rhode Island Red Chicken. Journal of Animal Research. 5. 915. 10.5958/2277-940X.2015.00151.5.
- [8]. Niña, Mae & Villar, Niña Mae & Ragandang, Andrian & Joromat, Richmond & Luz, Maria & Soriano, L & Aradilla, Agripina. (2022). Growth performance of Rhode Island red chicken supplemented with concoction and probiotic under free-range condition.
- [9]. Yadav, Ramji & Kumar, Sanjeev & Verma, Med Ram & Rahim, Abdul & Debnath, Jowel & Das, Ananta. (2022). Analysis of growth pattern of Rhode Island Red chicken using nonlinear models. Indian Journal of Animal Health. 62. 74-81. 10.36062/ijah.2022.12722.
- [10]. Pattewar, Seema. (2012). Kalanchoe pinnata: Phytochemical and pharmacological profile. International Journal of Phytopharmacy. 2. 10.7439/ijpp.v2i1.223.
- [11]. Mohan, Chandra & Balamurugan, V. & Salini, S. & Rekha, R.. (2012). Metal ion chelating activity and hydrogen peroxide scavenging activity of medicinal plant Kalanchoe pinnata. Journal of Chemical and Pharmaceutical Research. 4. 197-202.
- [12]. Bhavsar, Shruti & Dhru, Bhavita & Zaveri, Maitreyi & Chandel, Divya. (2018). A comparative pharmacognostical and phytochemical analysis of Kalanchoe pinnata (Lam.) Pers. leaf extracts. 7. 1519-1527.