

**Research:**

**1. List of Research Projects: Completed& Ongoing**

| <b>Sr. No.</b> | <b>Title of the Project</b>                                                                                                                                                                                                         | <b>Name of PI/ Major Advisor/ Research Worker</b>                                                      | <b>Funding Agency</b>            | <b>Total Cost of the project (Rs in Lak h)</b> | <b>Extra-mural (Funding agency)/ Intra-mural</b> | <b>Status</b> |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------|--------------------------------------------------|---------------|
| 1.             | Revolving Fund Scheme of ICAR “Application of Anatomical Technique for preparation of Articulated / Mounted Skeleton, Laboratory / Museum Specimens and Histological slides of Visceral organs of Domestic /Wild Animals and Birds” | Dr. V. R. Bhamburkar                                                                                   | ICAR, New Delhi                  |                                                | Extra- mural                                     | Completed     |
| 2              | Draft Power Assessment of Different Breeds of Cattle and Buffalo in Vidarbha Region                                                                                                                                                 | Dr. V.R. Bhamburkar ;<br>P.I.<br>Dr. S. B. Banubakode<br>Co-P. I,<br>Dr. N. C. Nandeshwar ; Dr. Rupali | NATP (CGP)<br>ICAR,<br>New Delhi |                                                | Extra- mural                                     | Completed     |

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|     |                                                      | Y. Charjan;<br>J.R.F.          |                                         |  |              |        |
| 3.. | FIST programme for<br>strengthening of<br>Department | Dr. V.R.<br>Bhamburkar<br>;P.I | Science and<br>Technology,<br>New Delhi |  | Extra- mural | Comple |

2. Research Priorities:

| Sr. No. | Research Area | Aim | Objective | Benefits of<br>Farmers |
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### 3. Thesis:

Master:

| Sr. No. | Name of the Student | Title of Thesis                                                                                                                                           | Year of Completion | Name of the Advisor  |
|---------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------|
| 1       | Dr. J. Y. Waghaye   | Histomorphological, Histochemical&Immunohistological Studies on Some Lymphoid Organs in goat ( <i>caprahircus</i> )                                       | 1998               | Dr. V. R. Bhamburkar |
| 2       | Dr. B. N. Meshram   | Age Related Histomorphological and Histoenzymic Changes In Pancreas of Goat                                                                               | 1999               | Dr. R. S. Dalvi      |
| 3       | Dr. S. K. Karmore   | Age Related Changes in Histomorphology and Histoenzymic Distribution in testes and epididymis in goat ( <i>caprahircus</i> )                              | 1999               | Dr. V. R. Bhamburkar |
| 4       | Dr. V. A. Patil     | Age Related Histomorphological and Histoenzymic Changes in Thyroid Gland In Relation To Anterior Pituitary In Goat                                        | 2000               | Dr. V. R. Bhamburkar |
| 5       | Dr. A. A. Gawande   | Studies on Prenatal Development of Stomach and Intestine in Goat                                                                                          | 2001               | Dr. V. R. Bhamburkar |
| 6       | Dr. J.S. Tekade     | Studies on Prenatal Development of Gonads in Goat                                                                                                         | 2001               | Dr. R. S. Dalvi      |
| 7       | Dr. J.M. Hood       | Studies on Prenatal Development of Kidney, Ureter and Urinary Bladder in Goat                                                                             | 2001               | Dr. R. S. Dalvi      |
| 8       | Dr. A. D. Barde     | Comparative Neuroanatomical Studies on Olfactory Apparatus in Dog and Cat                                                                                 | 2002               | Dr. R. S. Dalvi      |
| 9       | Dr. R.Y. Charjan    | Radiographic Anatomical Studies on The Fusion of Ossification Centres in The Developing Limb Bones of Different Breeds of Dog ( <i>Canis familiaris</i> ) | 2002               | Dr. V. R. Bhamburkar |
| 10      | Dr. V.H. Kadukar    | Radiographic Studies On The Appearance Of Ossification Centers And Fusion Of Epiphyseal                                                                   | 2003               | Dr. S.B. Banubakode  |

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|    |                    | Plate in The Pelvic Limb Bones of Dog                                                                                                          |      |                      |
| 11 | Dr. M.A. Kale      | Age Related Histomorphological and Histochemical Changes in Adrenal Gland In Relation to Anterior Pituitary in Goat                            | 2000 | Dr. V. R. Bhamburkar |
| 12 | Dr. U.P. Mainde    | Studies on Prenatal Development of Thymus in Goat ( <i>Capra hircus</i> )                                                                      | 2007 | Dr. N.C. Nandeshwar  |
| 13 | Dr. B. A. Zade     | Age Related Histological & Histochemical Changes in Testis of Dog ( <i>Canis Familiaris</i> )                                                  | 2007 | Dr. O.N. Ladukar     |
| 14 | Dr. S. S. Bodkhe   | Histochemical Changes During Histogenesis of Thymus in Chicken Embryo of RIR Layers ( <i>Gallus Domesticus</i> )                               | 2006 | Dr. S. B. Banubakode |
| 15 | Dr. H.S. Gabhane   | Histomorphological and Histochemical Study On Lymphoid Tissue In The Alimentary Tract Of Goat ( <i>Capra hircus</i> )                          | 2008 | Dr. N.C. Nandeshwar  |
| 16 | Dr. D.E. Gaykee    | Differentiation of Spotted Deer from Domestic Ruminants by PCR Technique                                                                       | 2008 | Dr. S. B. Banubakode |
| 17 | Dr. R.U. Gajbe     | Identification of Domestic Animals By PCR Technique                                                                                            | 2009 | Dr. S. B. Banubakode |
| 18 | Dr. A.M. Salankar  | Identification of some carnivore animals by PCR technique                                                                                      | 2010 | Dr. S. B. Banubakode |
| 19 | Dr. P.M. Gedam     | Histomorphological and Histochemical Studies on Intestinal Lymphoid Tissues in Kadaknath Breed of Poultry. ( <i>Gallus Gallus Domesticus</i> ) | 2010 | Dr. N.C. Nandeshwar  |
| 20 | Dr. S. Sathapathy  | Histological and histochemical studies on angioarchitecture of coronary artery in goat ( <i>Capra hircus</i> )                                 | 2013 | Dr. R. S. Dalvi      |
| 21 | Dr. S. P. Khandate | Histological and histochemical studies on angioarchitecture of                                                                                 | 2013 | Dr. N.C. Nandeshwar  |

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|    |                   | femoral artery in goat ( <i>Capra hircus</i> )                                                                                        |      |                      |
| 22 | PawanKawareti     | Gross anatomical and morphometrical studies on hooves in equines ( <i>Equus caballus</i> ) on different age groups                    | 2016 | Dr. N. C. Nandeshwar |
| 23 | PiyushBhole       | Identification of species and sex of domestic animals by PCR technique                                                                | 2023 | Dr. R. Y. Charjan    |
| 24 | Aayesha Bodupalli | Histomorphological and Histochemical studies of intestine in normal and <i>saccharomyces cerevisiae</i> fermented product fed broiler | 2024 | Dr. U. P. Mainde     |

Doctoral:

| Sr. No. | Name of the Student | Title of Thesis                                                                                                                             | Year of Completion | Name of the Advisor |
|---------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|
| 1       | Dr. R.S. Dalvi      | Study of anatomy of stifle joint complex in domestic ruminants                                                                              | 1982               | Dr. R.V. Pandit     |
| 2       | Dr.S.B. Banubakode  | Histological,Histochemical&Immunohistological changes in oviduct & uterus during different phases of estrus cycle & early pregnancy in goat | 1999               | Dr.V.R. Bhamburkar  |
| 3       | Dr.N.C. Nandeshwar  | Histomorphological, Histochemical&Immunohistological Studies on some Endocrine Organs of Goat ( <i>Capra hircus</i> )                       | 2007               | Dr.V.R. Bhamburkar  |
| 4       | Dr. J. Y. Waghaye   | Histological and Histochemical Changes in Ovary During Different phases of oestrus cycle in goat                                            | 2007               | Dr.V.R. Bhamburkar  |
| 5       | Dr. B. N. Meshram   | Electron Microscopic and Histo enzymatic studies on Pancreatic Islets In Goat                                                               | 2008               | Dr. R.S. Dalvi      |
| 6       | Dr. S. K. Karemore  | Electron Microscopic and Histo enzymatic Studies on the Testis and The Extra Testicular Duct System of Goat                                 | 2008               | Dr. R.S. Dalvi      |

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| 7  | Dr. DurgaChaurasia | Histochemical and Ultrastructural Studies on Mammary Gland in Buffalo ( <i>Babalus bubalis</i> )                                            | 2011 | Dr. R.S. Dalvi     |
| 8  | Dr. A. M. Salankar | Histological and histochemical studies on cerebrum, cerebellum, pons and medulla oblongata in goat ( <i>Capra hircus</i> ).                 | 2016 | Dr. R.S. Dalvi     |
| 9  | Dr. P.M Gedam      |                                                                                                                                             | 2016 | Dr.N.C.Nandes hwar |
| 10 | Dr.JigyasaRana     | Histomorphological and Histochemical studies on gut associated lymphoid tissue of Khaki Campbell breed of duck( <i>Anas platyrhynchos</i> ) | 2018 | Dr.S.B.Banubakode  |
| 11 | Dr. U.P. Mainde    | Histological, Ultrastructural and histochemical studies on skin of goat ( <i>Capra hircus</i> ).                                            | 2019 | Dr.S.B.Banubakode  |
| 12 | Dr. R. Y. Charjan  | Trichology of domestic and wild animals: A forensic approach                                                                                | 2020 | Dr.N.C.Nandes hwar |

4. Research Papers Published:

List of Research Publications:

| Sr. No. | Authors                                                                      | Year   | Title of the Research Paper                                                                 | Name of the Journal | Volume; Page Nos.           |
|---------|------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------|---------------------|-----------------------------|
| 1       | V. R. Bhamburkar; S. B. Banubakode and R. Y. Charjan                         | (2005) | Assessment of work performance in cattle and buffalo                                        | Draught Animal News | Vol. 42: 11 – 12            |
| 2       | P. L. Dhande; R. B. Bhosle and S. B. Banubakode                              | (1995) | Effect of length of gestation period on birth weight and sex of calf in gir and its crosses | Livestock Advisor   | Vol. XX Issue XI : 09 – 12. |
| 3       | V .A. Patil, V. R. Bhamburkar, R. S. Dalvi, S. B. Banubakode and M. A. Kale. | (1998) | Morphometrical study of pelvis in some animals                                              | J. Bombay Vet. Coll | 6(1): 45 – 46.              |

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| 4 | M. A .Kale, V. R .Bhamburkar, R .S. Dalvi, O. N. Ladukar, S. B. Banubakode and V. A. Patil:.                       | (1999) | Scapular Index as rider for species identification                                               | Intas Polivet,                                                             | Vol No. 1 Jan to June : 72 – 73. |
| 5 | M.A.Kale, V.R.Bhamburkar, R.S.Dalvi, S.B.Banubakode and V.A.Patil:                                                 | (1999) | Histological and histochemical study of preen glands in fowl ( <i>Gallus gallus domesticus</i> ) | Indian J. Vet. Anat                                                        | 11(2) : 176 – 177                |
| 6 | D. R. Kalorey; V. C. Ingle; R. Vijay; S. R. Bache; N. V. Kurkure; A. G. Ganorkar; S. B. Banubakode and S. D. Harne | (2000) | A preliminary study on fecal microflora in captive spotted deer ( <i>Axis axis</i> ),            | Indian Journal of Compound Microbiol., Immunological. Infectious Diseases. | Vol. 21 No. 1 : 160.161          |
| 7 | A. A. Gawande; V. R. Bhamburkar; S. B. Banubakode; N.C. Nandeshwar; R.S.Dalvi and R. Charjan                       | (2000) | Morphometric studies on skull of deer ( <i>Axis axis</i> )                                       | J. Bombay Vet. Coll                                                        | 8 (1-2) 46 – 48                  |
| 8 | A. A. Gawande; A. B. Barde; V. R. Bhamburkar; S. B. Banubakode; R. S. Dalvi and N. C. Nandeshwar                   | 2000   | Clinical anatomy of skull of tiger ( <i>Panthera tigris tigris</i> ) with reference to foramina  | J. Bombay Vet. Coll.                                                       | 8 (1-2) 44 – 45.                 |
| 9 | B. N. Meshram; R. S. Dalvi; V. R. Bhamburkar; S. B. Banubakode                                                     | (2000) | Histomorphological studies on caprine pancreas with reference to ageing.                         | Indian Journal of Veterinary Anatomy                                       | 13(2): 130 – 133                 |

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|    | and N. C. Nandeshwar                                                                               |        |                                                                        |                                       |                         |
| 10 | S. K. Karemore;<br>V. R. Bhamburkar; S. B. Banubakode; R. S. Dalvi and J. Y. Waghaye               | (2001) | Histochemical and histoenzymic studies of caprine pancreas.            | Indian Journal of Veterinary Anatomy  | IJVA 14 (1&2): 43 – 50  |
| 11 | B. N. Meshram; R. S. Dalvi; V. R. Bhamburkar; S. B. Banubakode; N. C. Nandeshwar and S. K. Karmore | (2002) | Histochemical and histoenzymic studies of caprine pancreas.            | Indian Journal of Veterinary Anatomy. | 14(1&2): :5 – 7.        |
| 12 | R. Y. Charjan; V. R. Bhamburkar; S. B. Banubakode; R. S. Dalvi; N. C. Nandeshwar and V. H. Kadukar | (2002) | Radiographic study on status of developing canine pectoral limb bones. | Indian Journal of Veterinary Anatomy  | IJVA 14 (1&2): 43 – 50. |
| 13 | Banubakode, S. B.; V. R. Bhamburkar; N. C. Nandeshwar and R.S. Dalvi                               | 2003)  | Agewise biometrical changes in the harderian gland of broilers         | Journal of Bombay Veterinary College, | 11 (1 & 2).             |
| 14 | S. K.Karmore; V. R. Bhamburkar; R.S. Dalvi; S.B.Banubakode and N.C. Nandeshwar                     | (2003) | Histomorphology of testes of goat ( <i>Capra hircus</i> )              | The Indian Journal of Anim. Sc.       | 73 (2) : 52 – 55.       |

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| 15 | M.A.Kale; V. R. Bhamburkar; S.B.Banubakode; N. C. Nandeshwar and R.S.Dalvi             | (2003) | Histomorphology of adrenal cortex of goat ( <i>Capra hircus</i> )                              | Indian Journal of Veterinary Anatomy | 15 (1&2) : 13 – 17.   |
| 16 | J. Y. Waghaye; V. R. Bhamburkar; S. B. Banubakode; R. S. Dalvi and S. C. Vhora         | (2003) | Histological changes during follicular atresia in the ovary of goat ( <i>Capra hircus</i> )    | Indian Veterinary Medical Journal    | Vol. 27 : 348 – 350.  |
| 17 | P. N. Shinde; D. K. Maske; D. Samradhni; S. W. Kolte and S. B. Banubakode              |        | Eperythrozoonosis in cattle and buffaloes and its treatment                                    | Journal of Veterinary Parasitology   | 18 (1) : 94 – 96.     |
| 18 | P. S. Deshmukh; N. C. Nandeshwar; V. R. Bhamburkar; S. B. Banubakode and R. S. Dalvi   | (2004) | Histological study of pancreas of peacock ( <i>Pavo cristatus</i> )                            | Indian Veterinary Medical Journal.   | Vol. 28 : 35 – 36.    |
| 19 | V. H. Kadukar; S. B. Banubakode; V. R. Bhamburkar and R. Y. Charjan                    |        | Radiographic studies on growth and development of the femur of dog ( <i>Canis familiaris</i> ) | Indian Journal of Veterinary Anatomy | 16 (1&2) : 17 – 20.   |
| 20 | D. K. Maske; G. K. Urade; S. W. Kolte; S. B. Banubakode; P. N. Shinde and D. Samradhni | (2004) | Therapeutic management of hypodermosis in cattle.                                              | Intas Polivet                        | Vol. 5 (1) : 37 – 39. |

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| 21 | V. D. Shankhapal; V. R. Bhamburkar; Dalvi, R. S.; S. B. Banubakode and A. P. Gawande.          | (2004) | Morphometric observations of skull of Indian Tiger ( <i>Panthera tigris tigris</i> ).                                                 | Journal of Bombay Veterinary College. | Vol. 12 (1&2) : 74 – 76 |
| 22 | V. R. Bhamburkar; S. B. Banubakode and Rupali Charjan                                          |        | Changes in the blood constituents of working bullocks during exercise on tread mill machine,                                          | International Journal of Cow science  | 1(1) : 43 – 46.         |
| 23 | N. Shinde; D. K. Maske; D. Samradhni; S. W. Kolte and S. B. Banubakode                         | (2005) | Some observations on bovine malaria associated with developing phases of <i>Plasmodium bubalis</i> in Vidarbha region of Maharashtra. | Journal of Veterinary Parasitology    | 19(1) : 61 – 62.        |
| 24 | S. B. Banubakode; V. R. Bhamburkar; S. C. Vhora; . V. D. Shankhapal and R. Y. Charjan          | (2005) | Histological study on changes in the oviduct during different phases of estrus cycle in goat ( <i>Capra hircus</i> ).                 | Indian journal of Veterinary Anatomy  | 17 (1&2) : 15 – 18.     |
| 25 | M. S. Dhakate; B. M. Gahlod; S. N. Patil; S. V. Upadhye; N. P. Dakshinkar and S. B. Banubakode | (2005) | Upward fixation of patella in a horse- A case report.                                                                                 | Royal Veterinary Journal of India     | Vol. 1 : 57 – 58.       |
| 26 | R. K. Motiani; S. P. Deshmukh; S. B. Banubakode; J. Y. waghaye; S. S. Bodkhe and S. Nain       | (2006) | Histomorphology of intestine of Monitor lizard ( <i>Varanus bengalensis</i> )                                                         | Indian Journal of Veterinary Anatomy  | 18(2) :                 |

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| 27 | S. S. Bodkhe; S. B. Banubakode; B. A. Zade; U. P. Mainde; R. S. Dalvi; A. G. Poharka       | (2007) | Gross anatomical study of sternum of vulture ( <i>Gyp bengalensis</i> ). r                                                                                            | Veterinary World                                     | Vol. 6<br>No. 1 :<br>07 -08    |
| 28 | Rajan Gajbe; S. B. Banubakode; S. M. Yasin; Nitesh K. jain; Gurdeep Khan                   | 2011   | PCR technique as a tool for identification of domestic animals.                                                                                                       | Veterinary Practitioner                              | Vol. 12<br>No. 2 :<br>181-183. |
| 29 | D. Chaiurasia; R. S. Dalvi, S. B. Banubakode, S. P. Ingole and B. Sinha                    | 2013   | Histological and histochemical study of Corpora Amylacea in Murrah buffalo.                                                                                           | Indian Veterinary Journal                            | 90 (12) :<br>62-64             |
| 30 | R. Y. Charjan; Sathpathy; S. B. Banubakode and S.K. Joshi                                  | 2014   | Radiographic studies on the fusion of ossification centres in the developing scapula and humerus bones in different breeds of dog ( <i>Canis familiaris</i> )         | Indian Journal of Veterinary Anatomy                 | vol.<br>26(1):<br>22-24        |
| 31 | J. Y. Waghaye S. B. Banubakode, R. Y. Charjan, Jigyasa Rana N. C. Nandeshwar, U. P. Mainde | 2014   | Age related histo-morphological changes of spenic connective tissue in goat ( <i>Capra hircus</i> )                                                                   | The Indian Journal of Veterinary sc. & biotechnology | Vol. 13,<br>issue 2,<br>1-6    |
| 32 | R. Y. Charjan; Sathpathy; S. B. Banubakode and S. K. Joshi                                 | 2014   | Radiographic anatomical studies on the fusion of ossification centres in the developing radius, ulna, carpal, metacarpal and phalanges of right forelimb in different | Indian Journal of Veterinary Anatomy                 | vol.<br>26(1):<br>76-78        |

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|    |                                                                                                                        |           | breeds of dog ( <i>Canis familiaris</i> );                                                                                |                                                               |                        |
| 33 | S. Sathapathy; S. K. Joshi; S. P. Khandate; R.S. Dalvi; S. B. Banubakode; U. P. Mainde; N.C. Nandeshwar and P.M. Gedam | (2014)    | Comparative histochemical studies on the angioarchitecture of coronary and femoral artery in goat ( <i>Capra hircus</i> ) | Indian Journal of Veterinary Anatomy                          | vol. 26(1): 107-109    |
| 34 | Sathapathy; Joshi S. K.; ; Khandate; R. S. Dalvi; R. Y. Charjan; U.P.Mainde; S. B. Banubakode and M.K.Singh            | June 2015 | Histochemical studies on the angioarchitecture of coronary artery in goat ( <i>Capra hircus</i> )                         | The Asian Journal of Animal Science                           | 10 (1) : 37-42         |
| 35 | A. M. Salankar, R. S. Dalvi, S. B. Banubakode, U. P. Mainde and P. K. Kavareti                                         | 2016      | Age related changes in Neuronal cell packing density of Occipital lobe in Goat ( <i>Capra hircus</i> )                    | Indian Journal of Veterinary Anatomy                          | 28 (1) : 49-51;        |
| 36 | S. S. Bodkhe, S. B. Banubakode, R. Y. Charjan, Jigyasa Rana                                                            | (2016)    | Immunohistochemical studies of thymus in chick embryo of RIR layers ( <i>Gallus gallus domesticus</i> ),                  | International journal of Science, Environment and Technology. | Page – 2286 – 2289.    |
| 37 | R. Gajbe, S. B. Banubakode, R. Y. Charjan, N. V. Kurkure, Jigyasa Rana, U. P. Mainde and Amol Salankar                 | (2016)    | Differentiation of cattle and Buffalo by PCR-RFLP method                                                                  | Indian Journal of Veterinary Anatomy                          | 28 (2) Page – 74 – 76. |

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| 38 | N. C Nandeshwar, S. B. Banubakode, R. Y. Charjan, U. P. Mainde and Jigyasa Rana                          | 2017   | Biometrical studies on adrenal gland of goat in different age groups                         | International Journal of Science, Environment and Technology | Vol. 6, No 4 : 2683-2687.; |
| 39 | Jigyasa Rana, S.B. Banubakode, N. C Nandeshwar, Rupali Charjan, U. P. Mainde and Shailesh Kumar Patel    | 2017   | Comparative morphological study of Tactile hair of Tiger and Leopard                         | Global Journal of Bio-science and Biotechnology              | Vol. 6 (3): 500-503.;      |
| 40 | U. P. Mainde, N. C. Nandeshwar, R. S. Dalvi, S. B. Banubakode, A. M. Salankar, S. Sathapathy and J. Rana | 2017   | Histogenesis of Thymus in Different Prenatal Age groups of goat Foetus                       | Indian Journal of Veterinary Anatomy                         | 29 (1): 5-6.;              |
| 41 | Jitendra Waghaye; S. B. Banubakode; Rupali Charjan; Jigyasa Rana and Naresh Nandeshwar;                  | 2017   | Age related histomorphological study of splenic parenchyma in goat ( <i>Capra hircus</i> )   | Indian Journal of Veterinary Anatomy                         | Vol. 29 No. 2 : 1-6;       |
| 42 | Kawareti; N. C. Nandeshwar, S. B. Banubakode; D. V. Patil, A. M. Salankar, U. P. Mainde and S. Ganguly   | (2017) | Morphometrical studies on hooves in horses ( <i>Equus caballus</i> ) in different age groups | International Journal of livestock Research                  | Vol. 7 (11)                |

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| 43 | U. P. Mainde,<br>S. B. Banubakode, N. C. Nandeshwar, R. Y. Charjan,<br>A. M. Salankar and D. V. Patil                                                                        | 2018   | Histological and Histochemical studies of Epidermis of goat ( <i>Capra hircus</i> )    | Indian Journal of Veterinary Anatomy                    | 30(2): 116 -117 |
| 44 | Jigyasa Rana, S. B. Banubakode, N. C. Nandeshwar, N. V. Kurkure, J. P. Korde and S. K. Patel                                                                                 | 2018   | Histochemical changes during development of Harderian gland in chicken.                | J. Anim. Res                                            |                 |
| 45 | J. Rana, S. B. Banubakode, N.C. Nandeshwar, Rupali Charjan and U. P. Mainde                                                                                                  | (2018) | Post hatched Developmental Changes in the Harderian gland of Chicken                   | Indian Journal of Veterinary Sciences and Biotechnology | 13(4): 40-45.   |
| 46 | Jigyasa Rana <sup>1*</sup> , Sanjay B. Banubakode <sup>1</sup> , Shailesh Kumar Patel <sup>2</sup> , R. S. Dalvi <sup>1</sup> , N. C. Nandeshwar <sup>1</sup> and R. Charjan | (2019) | Pre-hatched Developmental Changes of Harderian Gland in Chicken.                       | Journal of Animal Research                              |                 |
| 47 | U. P. Mainde, S. B. Banubakode, N. C. Nandeshwar, S. W. Bonde, R. Y. Charjan, A. M. Salankar and P. M. Gedam                                                                 | 2019   | Histological and Histochemical studies of sweat glands in goat ( <i>Capra hircus</i> ) | Indian Journal of Science, Environment and Technology   | 63-69           |

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| 48 | U. P. Mainde, S. B. Banubakode, N. C. Nandeshwar, R. Y. Charjan and A. M. Salankar                                        | 2019      | Histological and Histochemical studies of sebaceous glands in goat ( <i>Capra hircus</i> )                                                                                                                                                                                         | Indian Journal of Veterinary Anatomy                        | 31 (1) : 154-155        |
| 49 | R. Y. Charjan, N. C. Nandeshwar, S. B. Banubakode, N. V. Kurkure and S. W. Bonde                                          | 2019      | Cuticular and medullary structure of some wild herbivores                                                                                                                                                                                                                          | The Indian Journal of Veterinary Sciences and Biotechnology | 15 (1)                  |
| 50 | U. P. Mainde; S. B. Banubakode; N. C. Nandeshwar; R. Y. Charjan; Sathapathy, A. M. Salankar                               | 2020      | Transmission electron microscopic studies on skin of goat ( <i>Capra hircus</i> )                                                                                                                                                                                                  | Journal of Animal research                                  | Vol. 10 (5) : 711-716   |
| 51 | Jigyasa Rana <sup>1*</sup> , Shailesh Kumar Patel <sup>2</sup> , S. B. Banubakode and Rupali Charjan                      | Oct' 2020 | Comparative Gross Morphological Studies on the Lower Jaw (of Cattle Egret ( <i>Bubulcus ibis</i> ), Jungle Babbler ( <i>Turdoides striata</i> ), Yellow-footed Green Pigeon ( <i>Treron phoenicoptera</i> ), Barn Owl ( <i>Tyto alba</i> ) and Shikra ( <i>Accipiter badius</i> )) | International Journal of Livestock Research                 | Vol. 10 (10)            |
| 52 | Rupali Charjan; P. D. Bhole, S. B. Banubakode, S. V. Shinde, S. G. Jadhao, U. P. Mainde, N. C. Nandeshwar and Anand Singh | 2022.     | Identification of sex of domestic ruminants by using PCR technique                                                                                                                                                                                                                 | Indian Journal of Veterinary Anatomy                        | Vol. 34, No. 1 : 81-82; |

|    |                                                                                                                                          |      |                                                                                                 |                                                                                 |                           |
|----|------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------|
| 53 | P. D. Bhole,<br>Rupali Charjan;<br>S. B.<br>Banubakode, , N.<br>C. Nandeshwar<br>U. P. Mainde<br>,Anand Singh<br>and Ayesha<br>Bodupalli | 2024 | Identification of<br>species and sex of<br>domestic anials by<br>PCR based molecular<br>markers | International<br>journal of<br>veterinary<br>science and<br>animal<br>husbandry | Vol ;<br>NO.2;<br>158-161 |
| 54 | P. D. Bhole,<br>Rupali Charjan;<br>S. B.<br>Banubakode, , N.<br>C. Nandeshwar<br>U. P. Mainde<br>,Anand Singh<br>and Ayesha<br>Bodupalli | 2024 | Species identification<br>by PCR method using<br>'Cytochrome B' as a<br>molecular marker        | International<br>journal of<br>veterinary<br>science and<br>animal<br>husbandry | Vol ;<br>NO.2;<br>151-153 |

## 5. Research Recommendations:

|                 |                                                                                                                                                                               |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sr. No.</b>  | <b>1.</b>                                                                                                                                                                     |
| Year            | 2019-20                                                                                                                                                                       |
| Project Title   | Trichology of Domestic and Wild Animals : A Forensic Approach                                                                                                                 |
| Investigators   | <b>Name of Guide :</b> Dr. N. C. Nandeshwar;<br><b>Name of Student:</b> Rupali Charjan                                                                                        |
| Recommendations | Cuticular characteristics of hair can be best studied with negative scale cast prepared by using transparent Nail Enamel as best substitute for Scanning Electron Microscopy. |
| <b>Sr. No.</b>  | <b>2.</b>                                                                                                                                                                     |
| Year            | 2019-20                                                                                                                                                                       |
| Project Title   | Trichology of Domestic and Wild Animals : A Forensic Approach                                                                                                                 |
| Investigators   | <b>Name of Guide :</b> Dr. N. C. Nandeshwar;<br><b>Name of Student:</b> Rupali Charjan                                                                                        |
| Recommendations | Cross section of the hair can be used for identification of species of animals at group of species level.                                                                     |
| <b>Sr. No.</b>  | <b>3.</b>                                                                                                                                                                     |
| Year            | 2019-20                                                                                                                                                                       |
| Project Title   | Trichology of Domestic and Wild Animals : A Forensic Approach                                                                                                                 |
| Investigators   | <b>Name of Guide :</b> Dr. N. C. Nandeshwar;<br><b>Name of Student:</b> Rupali Charjan                                                                                        |
| Recommendations | Species of animals can be identified from the mitochondrial DNA of hair sample by molecular                                                                                   |
| <b>Sr. No.</b>  | <b>4</b>                                                                                                                                                                      |
| Year            | 2022-23                                                                                                                                                                       |
| Project Title   | Identification of species and sex of domestic animals by PCR technique                                                                                                        |

|                 |                                                                                                                                                                                                                                                               |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Investigators   | <b>Name of Guide :</b> Dr. Rupali Charjan<br><br><b>Name of Student:</b> Piyush Bhole                                                                                                                                                                         |
| Recommendations | 1)It is recommended to use species specific primer “cytochrome b gene” for identification of species of domestic animals.<br><br>2)the SRY and GAPDH gene as sex specific marker in duplex PCR are recommended for identification of sex of domestic animals. |