

Department of Anatomy & Histology:

Profile (In Brief):

The Department of Veterinary Anatomy was established in 1964 together with the inception of the college, as it deals with the basic courses of Veterinary Sciences at the level of under-graduate degree programme. At present as per the Minimum Standard of Veterinary Education (M.S.V.E.-2016) curriculum adopted under Veterinary Council of India, this department offers Anatomy course during first year of B.V.Sc. and A.H. degree at under-graduate level. The entire course of anatomy is divided into different Eight (8) units. It includes 1 to 6 units for Regional gross anatomy, unit 7 is for Histology (Microscopic Anatomy) and unit 8 is for Embryology (Development anatomy). As per the ICAR, there are 8 different courses at Master's level & 10 different courses at Ph.D. level of teaching. Dr. D.R. Mudholkar was the first Head of the Department, followed by Dr. K.N. Vyas, Dr. A.S. Bagi, Dr. Y.L. Vyas, Dr. K.M. Panchal, Dr. D.M.Bhayani and right now Dr. K M Panchal since November, 2021.

Faculties:

Sr. No.	Name & Designation	Mobile No.	E-Mail	Joining year	Qualification	Experience(y ear)	Papers Published
1	Dr. K.M.Panchal Professor & Head	9429329157	kmpanchal@kamdhenuuni.edu.in	1985	Ph.D.	36	75
2	Dr. D.M.Bhayani Professor	9427457192	dmbhayani@kamdhenuuni.edu.in	1986	Ph.D.	35	55
3	Dr. Sweta P. Pandya Professor	9898091826	drsweta26@kamdhenuuni.edu.in	1987	Ph.D.	33	30

Major Activities:

I. Teaching

- A. UG Courses-As per MSVE-2016 Anatomy Course.**
- B. This department offers Anatomy course during first year of B.V.Sc. and A.H. degree at under-graduate level.**
- C. The entire course of anatomy at under-graduate level is divided into different Eight (8) units. It includes 1 to 6 units for Regional gross anatomy, Unit 7 is for Histology (Microscopic Anatomy), Unit 8 is for Embryology (Development anatomy).**

- **Examination Pattern**

Internal Assessment	Course coverage		
First	30%	Max.Marks 40	Weightage 10
Second	60%	Max.Marks 40	Weightage 10
Third	90%	Max.Marks 40	Weightage 10
Annual examination (Theory)	Paper- i Paper-ii	Max.Marks 100 Max.Marks 100	Weightage 20 Weightage 20
Annual examination (Practical)	Paper- i Paper-ii	Max.Marks 60 Max.Marks 60	Weightage 20 Weightage 20

- **Annual Examination**

Papers		Units	Maximum Marks	Weightage
Paper-I	THEORY	1,2,3 and 4	100	20
Paper- II		567 and 8	100	20
Paper-I	PRACTICAL	1,2,3 and 4	60	20
Paper- II		567 and 8	60	20

PG Courses

COURSE NO.	COURSE TITLE	CREDITS
VAN 601	COMPARATIVE OSTEOLOGY AND ARTHROLOGY	1+2 =3
VAN 602	COMPARATIVE SPLANCHNOLOGY	2+2 =4
VAN 603	MYOLOGY, ANGIOLOGY, NEUROLOGY AND AESTHESIOLOGY OF OX	1+3 =4
VAN 604	GROSS ANATOMICAL TECHNIQUES	0+2 =2
VAN 605	THEORY AND PRACTICE OF HISTOLOGICAL AND HISTOCHEMICAL TECHNIQUES	1+2 =3
VAN 606	GENERAL HISTOLOGY AND ULTRASTRUCTURE	3+1 =4
VAN 607	SYSTEMIC HISTOLOGY AND ULTRASTRUCTURE	3+1 =4
VAN 608	DEVELOPMENTAL ANATOMY	3+1 =4
VAN 691	MASTER'S SEMINAR	1+0=1
VAN 699	MASTER'S RESEARCH	20
VAN 701	MYOLOGY, ANGIOLOGY, NEUROLOGY AND AESTHESIOLOGY OF EQUINE, CANINE AND PORCINE	0+3 =3
VAN 702	PRINCIPLES AND APPLICATIONS OF BIOMECHANICS	2+0 =2
VAN 703	AVIAN ANATOMY	1+2 =3
VAN 704	NEUROANATOMY	3+1 =4
VAN 705	ENDOCRINE ANATOMY	2+1 =3
VAN 706	THEORY AND APPLICATIONS OF ELECTRON MICROSCOPE	2+1 =3
VAN 707	HISTOENZYMOLOGY AND IMMUNOCYTOCHEMISTRY	2+1 =3
VAN 708	APPLIED EMBRYOLOGY AND TERATOLOGY	1+2 =3
VAN 709	FUNCTIONAL VETERINARY ANATOMY	2+0 =2
VAN 710	GROSS ANATOMY OF LABORATORY ANIMALS	1+1 =2
VAN 790	SPECIAL PROBLEM	0+2 =2
VAN 791	DOCTORAL SEMINAR I	1+0=1
VAN 792	DOCTORAL SEMINAR II	1
VAN 799	DOCTORAL RESEARCH	45

II. Research

A. Research Projects Completed = 2

A) Research Schemes:

- 1. Prepubertal Development of Mammary Glands of Surti buffalo funded by ICAR Ad hoc Research Schemes during 2000 – 2003 with the budget outlay of Rs.12,64,700=00
P.I. = Dr K.M.Panchal and Co-P.I. = Dr. D.M.Bhayani**
- 2. Anatomy of the Viscera of wild and Zoo Animals funded by ICAR Ad hoc Research Schemes during 2000 – 2003 with the budget outlay of Rs. 10,25,096=0000 P.I. = Dr.D.M.Bhayani and Co-P.I. = Dr.K.M.Panchal**

B. Number of M.V.Sc& Ph.D. degrees awarded

1. M.Sc Degree awarded = 03
2. M.V.Sc Degree awarded = 25
3. Ph. D. Degree awarded = 11

C. Research Publications = 365

D. Conferences / seminar / Symposia / Training Organized: 03

1. National symposium on “AVIAN ANATOMY”, held in 1972, Dept. of Anatomy, Veterinary college,G.A.U, Anand.
2. National symposium on“RECENT ADVANCES IN VETERINARY ANATOMY AND THEIR APPLICATIONS IN THE FIELD OF ANIMAL HEALTH, PRODUCTION &BIOTECHNOLOGY”held during 26-28December, 2003 at Dept. of Anatomy ,Veterinary college,GAU, Anand.
3. National symposium on “RECENT RESEARCH IN ANATOMY OF DOMESTIC ANIMALS” and 4th Convention of Indian Association of Veterinary Anatomists, held during 23-25 February, 1989, at Dept. of Anatomy, Veterinary college,G.A.U, Anand.

Achievements:

A. Awards/ Recognition of the faculty

1. Bhaikaka Prerit Hari Om Ashram Award = 03

This Department has earned consecutively three times a “Bhaikaka Prerit Hari Om Ashram Award” by Sardar Patel University, Vallabh Vidyanagar, during the year 1986 – 88 in collaboration with the Department of Animal Genetics and Breeding on “Correlated response to selection of Marwari, Patanwadi and Patanwadi X Merino crosses of sheep for wool production”

2. BEST PAPER/POSTER AWARD RECEIVED

1. Bhayani D.M.; Vyas K.N. and Vyas Y.L. (1998) Postnatal study on the sweat glands of Patanwadi and Marwari sheep. Present in national symposium and XIIIth convention of Indian Association of Veterinary Anatomist, held from 11-13 Dec. 1998 at Department of Anatomy Veterinary college, Guwahati (Assam).
2. Bhayani D.M.; Raval G.D. and Vyas Y.L. (2002) Gross study on various organs of the coot. Present in national symposium and XVIIth convention of Indian Association of Veterinary Anatomist, held from 14-16 Nov. 2002, at Department of Anatomy, Bombay Veterinary college, Mumbai. Technical Bulletin P-10.
3. Sweta, P. Pandya; Vyas Y.L. and Bhayani D.M. (2002) Study on biometry of skull and cranium of Lion, Tiger, Leopard and Hyena. Present in national symposium and XVIIth convention of Indian Association of Veterinary Anatomist, held from 14-16 Nov. 2002, at Department of Anatomy, Bombay Veterinary college, Mumbai. Technical Bulletin P-68.
4. Sweta P. Pandya, Vyas, Y.L., Bhayani, D.M. and Pandya, P.R. (2003) Gross study on the various measurements of dentition in Lion, Tiger, Leopard and Hyena. Presented in National Symposium on “Recent advances in Veterinary Anatomy and their applications in the field of animal health, production and Biotechnology, held at Dept. of Anatomy, Veterinary College, Gujarat Agricultural University Anand during 26-28 Dec. 2003. Abst. page No. 42.
5. Bhayani, D.M., Raval, G.D. and Vyas, Y.L. (2003) Histomorphological study on the Digestive Organs of Coot (*Fulica atra*) Presented in National Symposium on “Recent advances in Veterinary Anatomy and their applications in the field of

animal health, production and Biotechnology, held at Dept. of Anatomy, Veterinary College, Gujarat Agricultural University Anand during 26-28 Dec. 2003
Abst.page No. 99.

6. Bhayani, D.M., Raval, G.D. and Vyas, Y.L. (2003) Gross Anatomical study on the Digestive Organs of the Pelican. Presented in National Symposium on "Recent advances in Veterinary Anatomy and their applications in the field of animal health, production and Biotechnology, held at Dept. of Anatomy, Veterinary College, Gujarat Agricultural University Anand during 26-28 Dec. 2003
Abst.page No. 99.
7. Bhayani, D.M., Vyas, Y.L. and Pandya Sweta P. (2004). Gross Anatomical study on the various organs of the Lion and Leopard. Presented in National Symposium on "Recent Advances in Veterinary Anatomy and its interdisciplinary approach for livestock production". Held at Dept. of Anatomy, Faculty of Veterinary and Animal Sciences, West Bengal University of Animal and Fishery Sciences, Kolkata, during 16-18th Nov., 2004.
8. Bhayani, D.M. Sweta P.Pandya, and Vyas, Y.L.(2006).Gross osteometrical study on the skull of Blue Bull. Presented in National Symposium on"Recent advances in veterinary anatomy and their applications to improve live stock health, production and reproduction."Held at Department of Anatomy, college of veterinary science and animal husbandry, Jawaharlal Nehru, Krishi Vishva Vidyalaya, Jabalpur-480001 (M.P.)during 27-29 January-2006.
9. Bhayani, D.M Sweta P.Pandya,. and Vyas, Y.L(2006). Gross anatomical study on the various organs of the female Blue Bull. Presented in national symposium on "Recent advances in veterinary anatomy and their applications to improve live stock health, production and reproduction "Held at Department of anatomy, college of veterinary science and animal husbandry,Jawaharlal Nehru krishi vishva vidhalaya,Jabalpur-482001(M.P.)during 27-29 January-2006.
- 10.. Vyas, Y.L. Bhayani, D.M.,Panchal K.M. ,Dubal S.C. and Sweta P.Pandya, (2006)Effect of Levamisole hydrochloride and pregnancy on the thymus, spleen and iliac lymph nodes of Goat. Presented in national symposium on "Recent advances in anatomical concepts & techniques for the improvement of livestock production and health. "Held at Department of anatomy, faculty of veterinary science and animal husbandry, Shere-e-Kashmir University of Agricultural Science & Technology of Jammu.) during 12-23 December -2006.
- 11 Vyas, Y.L. Bhayani, D.M.,Panchal K.M. ,Dubal S.C. and Sweta P.Pandya;(2007) The Studies of Factor of Safety and Modulus of Elasticity on The Digital Tendons of Buffaloes and Bullocks.Presented in national symposium on "Recent advances in anatomy of the domestic animals with

special reference to developmental anatomy.”Held at Department of anatomy,College of veterinary science and animal husbandry, Sri Venkateswara veterinary University,Tirupati during 21-23 November 2007.

12 G.Purushotham, Vyas, Y.L.Patil,D.B.,Panchal K.M.Bhayani, D.M and,Dubal S.C.(2007) Ultrasonographic estimation of fetal age in pregnant Rabbit Ewes(*Oryctolagus cuniculus*).Presented in national symposium on “Recent advances in anatomy of the domestic animals with special reference to developmental anatomy.”Held at Department of anatomy,College of veterinary science and animal husbandry, Sri

Venkateswara veterinary University,Tirupati during 21-23 November 2007.9G.Rajeswar Rao Gold Medal)

13. Pinkikumari, Panchal, K.M. and Vyas, Y.L (2009). “Gross and histological studies on Harderian gland of domestic fowl (*Gallus gallusdomesticus*).”presented at XXIVthConvention and International Congress on Veterinary Anatomy, held at Lucknow (U.P.) during 4-6 November, 2009.

Publications

Sr. No.	Name of Journal	Year	Title	Author(s)
1	<i>Global Journal For Research</i>	2014	Histomorphological and Micosopical study of the retina in Adult Marwari Goat (<i>Capra hircus</i>)	RakeshkumarBarhaiya, Malsawmkima , D.M. Bhayani, and
2	<i>Global Journal For Research</i>	2014	Histomorphological study on corneaand scleraof adult Surti buffalo	Malsawmkima, RakeshkumarBarhaiya, Y. L. Vyas and D.M. Bhayani
3	<i>Indian Journal of Veterinary Anatomy</i>	2015	Gross morphological Studies on the eye ball of the adult Surti buffalo	Malsawmkima, RakeshkumarBarhaiya, Y. L. Vyas and D.M. Bhayani
4	<i>Indian Journal of Veterinary Anatomy</i>	2015	Gross anatomical, Histomorphological and Biometrical Study of the Cornea in Adult Marwari Goat(<i>Capra hircus</i>)	Rakesh Kumar.Barhaiya, Malsawmkima, Y.L.Vyas and D.M.Bhayani
5	<i>Indian Journal of Veterinary Anatomy</i>	2016	Gross Anatomical Studies on Pectoral Girdle of Small Indian kite	Aarti Sharma and S. C. Dubal
6	<i>Indian Journal of Veterinary Anatomy</i>	2016	Aerodynamical measurements of the small Indian Kite (<i>Milvusmigransgovinda</i>)	Aarti Sharma and S. C. Dubal

7	<i>Advances in Life Sciences</i>	2016	Comparative Study on Size and Area of Chondrocytes of Articular Cartilage of Femoral and Tibial Condyles in Buffalo Calf, Adult Buffalo and Adult Cattle	Harsh V. Goswami and Subhash C. Dubal
8	<i>Advances in Life Sciences</i>	2016	Comparative Study on Thickness of Articular Cartilage of Femoral and Tibial Condyle in Buffalo Calf, Adult Buffalo and Cattle Measured by Ultrasonography and Micrometry	Harsh V. Goswami and Subhash C. Dubal
9	<i>Advances in Life Sciences</i>	2016	Study on the Surface Density of the Chondrocytes Articular Cartilage of Femoral and Tibial Condyle in Adult Buffalo	Harsh V. Goswami and Subhash C. Dubal
10	<i>Advances in Life Sciences</i>	2016	Comparative Study on Total Erythrocyte Count of Different Breeds of Fowl (<i>Gallus gallus domesticus</i>)	Dhaval m. Chauhan, D. M. Bhayani Harsh V. Goswami
11	<i>Indian Journal of Veterinary Sciences and Biotechnology</i>	2016	Morphology and Morphometric Study of Mandible of Asiatic Lion (<i>Pantheraleo</i>), Indian Tiger (<i>Pantheratigris</i>) and Common Leopard (<i>Pantherapardus</i>).	SwetaPandya, D.M.Bhayani and Y.L.Vyas
12	Trends in Bioscience	2017	Anatomy of the Femur of Asiatic Lion (<i>Pantheraleo</i>)	SwetaPandya, and D.M.Bhayani
13	Indian Journal of Vet.Science & Biotechnology	2017	Osteometry of Lumbar Vertebrae of Asiatic Lion (<i>Pantheraleo</i>)	SwetaPandya, AlkaSuman, VanilaShukla and D.M.Bhayani
14	Indian Journal of Vet.Science & Biotechnology	2017	Morphology and Morphometric study of Mandible of stripped Hyena (<i>Hyena hyena</i>)	SwetaPandya, D.M.Bhayani and Y.L.Vyas
15	<i>Indian Journal of Veterinary Anatomy</i>	2016	Hemoatological Parameters of Farmed Emu	Chemmalar, K. M. Panchal and Y. L. Vyas
16	<i>Indian Journal of Veterinary Anatomy</i>	2016	Morphological and Micrometrical Study of Erythrocyte of Emu	Chemmalar, K. M. Panchal and Y. L. Vyas
17	<i>Indian Journal of Veterinary and Animal Science Research</i>	2016	Micrometrical values of blood cells of Emu	S. Chemmalar, K. M. Panchal and Y. L. Vyas
18	<i>The Ind. Jr. of Vet. Bio-Technology</i>	2017	Morphology and morphometry of Rhinencephalon of Brain of Surti buffalo (<i>Bubalus bubalis</i>).	AlkaSuman; SwetaPandya; and VanilaShukla
19	<i>Advances in Life Sciences</i>	2017	Gross, Biometrical and Histomorphological Studies on Stomach of Frizzled feather and Naked Neck Fowls	Trupti. Mal, Harsh Goswami and K. M. Panchal

20	<i>Indian J. Anim. Res.</i>	2017	Gross anatomical and biometrical parameters of hippocampus in Surti buffalo(<i>Bubalus bubalis</i>).	Gori, H.P., Dubal, S.C., Shabir A. M. And Rathwa, S.D.
21	<i>Indian J. Current Microbiol. App. Sc.</i>	2018	Studies of Histology, Histochemistry and Micrometry of hippocampus in Surti buffalo(<i>Bubalus bubalis</i>)	Gori, H.P., Dubal, S.C., V. A. Patel and K. M. Panchal.
22	<i>Indian Jr. of Small Ruminants</i>	2018	Postnatal Histomorphological Changes in Thymus of Surti Goat.	S.Chaurasia, Vyas K.N., R.Maneka, Panchal, K.M. and T.K.S.Rao
23	<i>Indian Journal of Veterinary Anatomy</i>	2018	Biometrical Study on Rumen of Surti Goat (<i>Capra hircus</i>).	Chaurasia, Vyas K.N., R.Maneka, Panchal, K.M. and T.K.S.Rao
24	<i>Trends in Biosciences</i>	2018	Gross, Biometrical and Histological Study of Abomasum of Surti Goat (<i>Capra hircus</i>) in India	TanviSoni andK.M. Panchal
25	<i>Indian J. Anim. Res.</i>	2018	Age related gross morphological studies on the thymus in postnatal Surti goat(<i>Capra hircus</i>).	Chaurasia, Vyas K.N., R.Maneka, Panchal, K.M. and T.K.S.Rao
26	<i>Indian J. Vet. Res (THE)</i>	2018	Gross, Biometrical and Histological Study of reticulum and esophageal groove of Surti Goat (<i>Capra hircus</i>) in India.,	TanviSoni andK.M. Panchal
27	<i>J. Vet. Sc. and Biotechnology,</i>	2019	Gross and Biometric Studies on Pelvic Bone of the Emu(<i>Dromaius novaehollandiae</i>).	IshitaBarvalia and KM Panchal
28	<i>Indian Journal of Veterinary Anatomy</i>	2019	The Gross and Biometrical observations on Femur of The Emu (<i>Dromaius Novaehollandiae</i>).	IshitaBarvalia and KM Panchal
29	<i>Indian Journal of Small Ruminants</i>	2020	Histogenesis of Spleen in Foetus of Surti goats.	ShailendraChaurasia, R. Menaka, K.M. Panchal and Niranjana Kumar

Future Thrust Areas

The Department is intended to work on the basic research related to Gross and Histo-morphological aspects of various systems of the Avian Species, Nervous system of the Goat and Buffalo, Viscera of the Wild Species as well as Sonographic land marks of various viscera of the buffalo and dog as a source of basic & reference information for scientific research.



Sitting Arrangement for Post Graduate Students.



Vaccum Oven for Histological Tissue Processing



Paraffin Section Cutting on Microtome