

## DEPARTMENT OF VETERINARY ANATOMY

### Faculty Profile

Sr . No.	Name	Designation	Email:	Mobile	Joining year	Qualification	Experience (Year)	Research papers
1	Dr. Vishnudeo Kumar	Associate Professor and Head	vishnuvet79@gmail.com	8758869439	2011 (JAU)	Ph.D.	13	35
2	Dr. Anil Sharma	Assistant Professor	Dranilsharma82@gmail.com	9558737720	2012 (JAU)	Ph.D.	10	32

### About the Department

The Department of Veterinary Anatomy was established since the inception of College of Veterinary Science and Animal Husbandry, Junagadh in the year 2008. The department is functioning under the administration of it with the objectives to teach anatomy of domestic animals and birds to undergraduate and postgraduate students. To impart training for field veterinarians/ clinicians to refresh their anatomical knowledge and provide hands on training which can be applied in clinical diagnosis, physical examination and surgical procedures. To provide qualified human resource in the field of Veterinary Anatomy, Histology and Embryology. The department progressed steadily by delivering the quality education to undergraduate and post-graduate students. The department extends the expertise to provide the education to students of Diploma in A.H., Junagadh. The modern equipment and other facilities are available in the department. The department is having osteology and arthrology lab., histology and embryology lab., tissue preparation lab., a large dissection hall, educational museum containing sufficient number of specimens and a post graduate research lab. with modern instrumentation facility to work in the field of histology, histochemistry, histoenzymology and immunohistochemistry, scanning electron microscopy. In addition the department developed the various modern techniques for the preparation teaching models such as plastination, corrosion cast and pneumatic dry specimen techniques and prepared many samples by this methods. As the part of academic activities, the department published practical/ laboratory

manual for all the course of veterinary anatomy, also published 4 books/ book chapter, one training manuals and many scientific research articles and popular articles.

### Research Area

1. Gross anatomy
2. Histology
3. Histochemistry
4. Histoenzymology
5. Immunohistochemistry
6. Embryology
7. Electron microscopy

### Project Detail –

The following Research project approved by ZREAC and AGRESCO was completed -

Sr. No.	Title of Research Programme	Status
1	Histomorphometry & Histochemical observations on the ovaries of Jaffrabadi buffaloes in different season of year	Completed
2	Study on Postnatal Development of Adrenal Gland in Gohilwadi Goat ( <i>Capra hircus</i> ).	Completed

### Recommendations (Scientific):

Sr. No.	Recommendations	Year of Approval
1	In Jaffarabadi buffalo, based on biometrical and micrometrical observations, higher functional activities of ovaries are observed in winter season.	2014-15
2	Adrenal gland of day old Gohilwadi kid has definite cortex and medulla, while adult adrenal exhibits the structures of typical zones of cortex and medulla. Width of definite cortex increases, while that of foetal zone decreases with increasing age.	2015-16

### Achievements and List of Research Publications

### Awards/ Medals Received by the Faculty/ Students

1. Best Poster Presentation Award (First Position) by IAAVR (2011) - Dr. Vishnudeo kumar.
2. Medal and Award for Best Oral paper Presentation in ultrastructure by IAVA (2019) –

Dr. Vishnudeo Kumar

### **Other achievements**

- Developed the facility for Plastination, Corrosion cast and pneumatic dried specimen techniques for preparation of advanced teaching models.
- A book on short questions for U.G. and P.G. students has been published.
- Power Point Presentations have been prepared for all units of UG and P.G. courses
- Class notes for all courses are available with faculty members
- Practical manuals of all courses have been prepared.

### **List of Recent Research Publications (2019-20)**

1. Vishnudeo Kumar and Anil Sharma (2019). Gross and Histological Observations on Adrenal Gland of Pig. Indian Journal of Veterinary Anatomy. 31(2). 117-118.
2. A. Sharma, Y. L. Vyas, P. H. Tank, Vishnudeo Kumar and V. K. Singh (2019). Gross morphometric study on pineal and pituitary glands of Jaffarabadi buffalo during different seasons of the year. Indian Journal of Veterinary Anatomy. 31(2). 103-105.
3. Vishnudeo Kumar, R. S. Sethi and O. Singh (2019). Histogenesis of Definite Cortex in Adrenal Gland during Postnatal Development in Buffalo. Indian Journal of Veterinary Anatomy. 31(2). 88- 90.
4. Sharma Anil, Vyas Y. L., Vishnudeo Kumar, Tank P. H. and S. H. Talekar (2020) Gross Morphometric Studies on Thyroid and Adrenal Glands of Jaffarabadi Buffalo during Different Seasons of the Year. Indian Journal of Veterinary Anatomy. 32(1). 19-22.
5. Vishnudeo Kumar, R. S. Sethi and O. Singh (2021). Histological Study on the Fibrous Architecture of the Adrenal Gland during Postnatal Development in Buffalo. The Indian Journal of Veterinary Sciences and Biotechnology. 17(1): 59-62.

### **Activities/Trainings/Seminars/Workshops organized by Department**

1. A five days vocational Training on “Alternative scientific modalities to improve the learning skills in Veterinary Anatomy” was organized by the Department of Veterinary

Anatomy, College of Veterinary Science and A. H., Junagadh Agricultural University, Junagadh on 21<sup>st</sup> to 25<sup>th</sup> January, 2020 under the aegis of Institutional Development Plan, ICAR.

### Information of Courses offered

#### Under-graduate Programme (As per VCI MSVE, 2016)

	Course Title	Credit
	<b>Veterinary Anatomy</b>	4+3
	Theory	
	Unit 1: General osteology, anthology and myology	
	Unit 2: Fore limb	
	Unit 3: Head and neck	
	Unit 4: Thorax	
	Unit 5: Abdomen	
	Unit 6: Hind limb and pelvis	
	Unit 7: Cytology	
	Unit 8: Embryology	
	Practical	
	Unit 1: General osteology, anthology and myology	
	Unit 2: Fore limb	
	Unit 3: Head and neck	
	Unit 4: Thorax	
	Unit 5: Abdomen	
	Unit 6: Hind limb and pelvis	
	Unit 7: Microscopy and micrometry, (histology)	
	Unit 8: Embryology	

#### Post-graduate Programme

Sr. no.	Course no.	Course Title	Credits
1	VAN -601	Comparative osteology and arthrology	1+2
2	VAN -602	Comparative splanchnology	2+2
3	VAN -603	Myology, angiology, neurology and aesthesiology of ox	1+3
4	VAN -604	Gross anatomical techniques	0+2
5	VAN -605	Theory and practice of histological and histochemical techniques	1+2
6	VAN -606	General histology and ultrastructure	3+1
7	VAN -607	Systemic histology and ultrastructure	3+1
8	VAN -608	Developmental Anatomy	3+1
9	VAN -691	Master's Seminar	1+0

10	VAN -699	Master's Research	20
11	VAN-701	Myology, angiology, neurology and aesthesiology of equine, canine and porcine	0+3
12	VAN-702	Principles and applications of biomechanics	2+0
13	VAN-703	Avian anatomy	1+2
14	VAN-704	Neuroanatomy	3+1
15	VAN-705	Endocrine anatomy	2+1
16	VAN-706	Theory and applications of electron microscope	2+1
17	VAN-707	Histoenzymology and immunocytochemistry	2+1
18	VAN-708	Applied embryology and teratology	1+2
19	VAN-709	Functional veterinary anatomy	2+0
20	VAN-710	Gross anatomy of laboratory animals	1+1
21	VAN-790	Special problem	0+2
22	VAN-791	Doctoral seminar i	1+0
23	VAN-792	Doctoral seminar ii	1+0
24	VAN-799	Doctoral research	45

**Photo gallery**  
**Media gallery**



**Releasing of Training Manual**



**Presidential Address by Dr. P. H. Tank**



**Motivational remarks by, Dr. Arvind Kotecha, Chief Guest**



**Felicitation of Dr. K. N. Vyas after his Lecture**



**Hands-on Training on Wild body programme by Dr. P.V.S. Kishore**



**Hands-on Training on Immunohistochemistry Dr. R. S. Sethi**



**Lecture given by Dr. S. A. Gaikwad on Taxidermy**



**Hands-on Training on Plastination Dr. S. Chaurasia**



**Hands-on Training on Dr. S. A. Gaikwad on Corrosion cast**



**Hands-on Training on Dr. S. A. Gaikwad on Fish **moulding****



**Visit of electron microscopic facilities at  
bitechnology lab. JAU, Junagadh**



**In Plenarry sesion welcome of Hon'ble Vice  
Chancellor, Dr. V. P. Chovatia JAU,  
Junagadh**



## Photographs of Laboratories



Museum



Osteology & Arthrology Lab.



Histology & Embryology Lab.



Dissection Hall



Tissue Preparation Lab.



P. G. Lab.

## Teaching models



**Corrosion cast of Lung**

### **Contacts Us:**

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## DEPARTMENT OF VETERINARY PHYSIOLOGY AND BIOCHEMISTRY

### Faculty position:

Sr. No.	Name and	Designation	E-mail	Contact	Joining	Qualification	Experience (in Years)	Publications
1	Dr. Arun Kumar Sharma	Associate Professor & Head	<a href="mailto:drarunvet@gmail.com">drarunvet@gmail.com</a>	9727743994	Assistant professor: 2009 Associate professor: 2018	Ph. D. (Vet. Physiology)	16	35
2	Dr. Ramesh J. Padodara	Assistant Professor	<a href="mailto:rameshpadodara3@gmail.com">rameshpadodara3@gmail.com</a>	9228223162	2009	Ph. D. (Vet. Physiology)	12	37
3	Dr. Vivek Kumar Singh	Assistant Professor	<a href="mailto:drvivek_biochem@yahoo.com">drvivek_biochem@yahoo.com</a>	8306857587	2012	Ph. D. (Anim. Biochemistry)	9	37
4	Dr. Arjun B. Odedara	Assistant Professor	<a href="mailto:arjunodedra81@gmail.com">arjunodedra81@gmail.com</a>	8128527781	2015	M. V. Sc. (Vet. Biochemistry)	6	18
5	Dr. Amrita A. Vasava	Assistant Professor	<a href="mailto:amritavasava@yahoo.in">amritavasava@yahoo.in</a>	9924454777	2016	M. V. Sc. (Vet. Biochemistry)	5	13

### About the Department:

Department of Physiology and Biochemistry started functioning in 2009 has been working in the area of teaching, research and extension education since establishment of College of Veterinary Science & A.H., JAU, Junagadh with objectives to impart quality education and strengthen research in Veterinary Physiology and Biochemistry, Teaching of under-graduate & post-graduate students and to promote the advancement of learning and research in Veterinary Physiology and Biochemistry. Presently, Department is active in teaching of the U.G. students in the subject of Physiology and Biochemistry with five different courses namely (1) Veterinary Physiology, (2) Veterinary Biochemistry (3) Animal Biotechnology (4) Veterinary Clinical Biochemistry & Laboratory Diagnosis-I Veterinary Clinical Biochemistry & Laboratory Diagnosis- II. Additionally, arrangement for the visit of students to semen collection center and meteorology observatory of JAU is also carried out to impart the practical knowledge about

various activities carried out in respective units. Department is also engaged in M.V.Sc and Ph.D. teaching offering 24 courses. Analysis of clinical samples from TVCC and other agencies of government are also carried out in the Department. Department is actively involved in Polytechnic in AH teaching conducting one course namely Introductory Animal Physiology. Departmental laboratories are well equipped with latest instruments and audio-visual aids. The department offers specialization in Veterinary Physiology and Veterinary Biochemistry with diagnostics, clinical Biochemistry, Environmental Physiology, Semen Biology, Infertility Profiling, Endocrinology, Ketosis Experimental Physiology, Mastitis Biochemical Studies, Reproductive Physiology, Bubaline/ Caprine stem cell research, Digestive Physiology. Important Instrumental facilities available in Department include ELISA Reader, ELISA Washer, Gradient PCR, Auto Hemato-analyser, Gel Documentation System, Refrigerated high speed centrifuge, Gel Electrophoresis, Double Distillation plant and Laminar Flow cabinet.

**Research area:**

- 1. Stem Cell Research**
- 2. Reproduction Physiology and Endocrinology**
- 3. Digestive Physiology and Metagenomics**
- 4. Environmental Physiology**
- 5. Metabolic Biochemistry**
- 6. Reproductive Biochemistry**

**Research project completed:**

<b>Sr. No.</b>	<b>Title of Research Programme</b>	<b>Status</b>
1	Assessment of Blood cells' Immunocompetence around Parturition in Gir cows and Jaffarabadi buffaloes	Completed
2	Hemato-biochemical profiles of Kathiawari horses in and around Junagadh	Completed
3	Hematological and Biochemical aspects associated with hemoprotozoan infection in cows, buffaloes and horses	Completed

**Recommendations (Scientific):**

1. During the peripartum period phagocytic activity and lymphocyte proliferation response are lower in Gir cows compared to Jaffarabadi buffaloes.
2. Major hematological and biochemical indices of Kathiawari breed of Indian horses are comparable with other breeds of horse whereas within Kathiawari breed total granulocyte% and MCHC (g/dl) is found higher in female than male and lymphocyte% found higher in male than the female horse.

3. Hemoprotozoan infection in cows, buffaloes, and horses causes anemia with a significant increase in serum AST & ALT levels as well as a significant change in SOD & MDA levels indicating oxidative stress and oxidative damage.

**Achievements:**

Sr. No.	Name of the Students /Faculty	Year	Name of Awards	Place/Institute
1	Dr. V. K. Singh	2018	Gold Medal for best paper	Indian Society for Veterinary Surgery, Hisar

**Programmes Organized:**

Sr. No.	Name of the Programme Organized	Date	Sponsoring Agency
1	National Training on “Latest Advancement In Upstream Reproductive Physiological Techniques”	16-18 September 2019	IDP- NAHEP, JAU, Junagadh (Gujarat)
2	West zone SAPI Quiz Competition	30 January 2020	JAU, Junagadh (Gujarat)
3	Online Vocational Training on “Immunological Advancements in Male and Female fertility” in Collaboration with Dept. of Vet. Gynaecology and Obstetrics	1-5 September 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)
4	Online Vocational Training on “Advancements in Physiological Function Tests in Domestic Animals and Pets”	1-5 March 2021	IDP- NAHEP, JAU, Junagadh (Gujarat)
5.	Online Lecture by Dr. Lenin Bhatt (Senior veterinary Officer, State Disease Diagnostic Centre, Department of Animal husbandry, Jaipur (Rajasthan) entitled, “Advance diagnostic techniques & status of important Zoonotic Diseases”	09 April, 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)
6.	Online Lecture by Dr. Motilal Madan (Ex. Vice-chancellor, DUVASU, Mathura (UP) entitled, “Endocrine Control Of Reproductive Cycle”	10 April, 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)
7.	Online Lecture by Dr. A. K. Gahlot (Ex. Vice chancellor, RAJUVAS, Bikaner (Rajasthan) entitled, “Contribution of Veterinary Science and Animal Husbandry to National Economy and Future Scope of Veterinary Science”	11 April, 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)
8.	Online Lecture by Dr. Ninan Jacob (Professor and	06 May, 2020	IDP- NAHEP,

	Head, Department of Veterinary Physiology, Rajiv Gandhi Institute of Veterinary Education and Research, Kurumbapet, Puducherry) entitled, “Effect of Climate on Animal Production”		JAU, Junagadh (Gujarat)
9.	Online Lecture by Dr. Bharti Jain (Practicing Advocate and Patent Agent, Noida, Delhi) entitled, “Role of Intellectual Property Rights in Academic and Research Institutions with Specific Focus on Veterinary Sciences”	21 October, 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)
10.	Online Lecture by Dr. Vaishali Ahuja (German Language Trainer/ Translator CRB Tech, Pune (Maharashtra) entitled, “Introduction of German language and its importance in the Veterinary Profession”	27 October, 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)
11.	Online Lecture by Dr. Varun Ahuja (Senior Scientist, Drug safety Assessment, Novel Drug Discovery & Development, Lupin LTD., Pune) entitled, “Opportunities for Veterinarians in Corporate sector and Abroad”	02 November, 2020	IDP- NAHEP, JAU, Junagadh (Gujarat)

### 1. National Training on “Latest Advancement in Upstream Reproductive Physiological Techniques”

Three Days National Training program on “**Latest Advancement in Upstream Reproductive Physiological Techniques**” was organized by the Department of Veterinary Physiology & Biochemistry at College of Veterinary Science and Animal Husbandry, Junagadh Agricultural University, Junagadh under the Institutional Development Plan from 16<sup>th</sup> to 18<sup>th</sup> September, 2019. **Dr. A. K. Sharma**, Associate Professor and Head, Department of Veterinary Physiology & Biochemistry, COVSAH, JAU, Junagadh was the organizing secretary. Around 150 delegates and students from the host institute, other colleges of JAU, teachers, and faculty participated in the event which mainly focused on recent advances related to reproductive Physiological techniques in animal sciences. The three days program was divided into three technical sessions and the first two days in afternoon session hands-on training. Speakers were invited from National level institutes and universities to deliver talks on the relevant subject. **Dr. S. K. Dabas**, Principal Scientist, CIRC, Meerut, UP delivered a talk on “Oocyte collection techniques, Induction of ovulation and Embryo Transfer”. **Dr. S. P. Nema**, Professor and Head, Department of Veterinary Gynaecology & Obstetrics, COVSAH, Nanaji Deshmukh Veterinary Science University, Mhow, MP presented his lecture on “Functional Infertility in Bovines”. **Dr. K. B. Vala**, Associate Professor & Head, Department of Veterinary Gynaecology & Obstetrics, COVSAH, JAU, Junagadh demonstrated buffalo genitalia with differences in other species followed by **Dr. K. H. Parmar**, Assistant Professor, Department of Veterinary Gynaecology & Obstetrics, COVSAH, JAU, Junagadh described the various oocyte collection techniques from ovaries. **Dr. A. K. Sharma**, Associate Professor & Head, Department of Veterinary Physiology & Biochemistry, COVSAH, JAU, Junagadh demonstrated In Vitro Maturation (*IVM*) technique from buffalo oocyte with its application in animals. The second day of the training session started with the visit to cattle breeding farm and a practical session at the semen station and how

the semen is collected and evaluated taken by **Dr. G. B. Solanki**, Assistant Professor, CBF and **Dr. S. S. Parikh**, Assistant Professor, CBF. **Dr. P. G. Koringa**, Assistant Professor, Department of Animal Biotechnology, College of Veterinary Sci. & A.H., AAU, Anand delivered a lecture on “Semen sexing”. **Dr. Dilip Swain**, Assistant Professor, Department of Veterinary Physiology, COVSAH, DUVASU, Mathura, UP delivered the lecture on “Advanced semen evaluation techniques”. **Dr. A. K. Sharma**, Associate Professor & Head, Department of Veterinary Physiology & Biochemistry, College of Veterinary Science & A.H., JAU, Junagadh delivered the technical presentation on "Recent advancement in In-vitro maturation (IVM) technologies in domestic animals". **Dr. V. S. Chauhan**, Senior Scientist, P & C Division, ICAR-IVRI, Izatnagar, Bareilly, UP put on technical presentation on "Future of reproductive physiological techniques with a focus on India".

## **2. Zonal (West) Level “Veterinary Physiology Quiz Competition - 2020”**

**Zonal (West) Level Veterinary Physiology Quiz Competition - 2020 FOR the EDU-EXCEL Madan trophy** was organized by the Department of Veterinary Physiology & Biochemistry at College of Veterinary Science and Animal Husbandry, Junagadh Agricultural University, Junagadh on **30<sup>th</sup> January 2020**. **Dr. A. K. Sharma**, Associate Professor and Head, Department of Veterinary Physiology & Biochemistry, COVSAH, JAU, Junagadh organized the event along with the faculty members DR. R. J. Padodara, Dr. V. K. Singh, Dr. A. B. Odedara and Dr. A. A. vasava. Total nine colleges participated in the quiz competition from different places like Post Graduate Institute of Veterinary Education And Research (PGIVER), Jaipur, Rajasthan; College of Veterinary Science & A.H., Anjora, Durg, Chhattisgarh; Arawali Veterinary College, Sikar, Rajasthan, Krantisinh Nana Patil College of Veterinary Science, Shirwal, Satara, Maharashtra; Nagpur Veterinary College, Nagpur, Maharashtra; College of Veterinary Science & A.H., A.A.U., Anand, Gujarat; Vanbandhu College of Veterinary Science and A.H., N.A.U., Navsari, Gujarat; College of Veterinary Science & A.H, S.D.A.U., SKnagar, Gujarat & College of Veterinary Science & A.H., J.A.U., Junagadh, Gujarat. From each college, two students have participated. Subsequently, after the inaugural function online screening examination was held at the examination hall, JAU, Junagadh at 11.00 a.m. At the end of the examination, the first four teams who got maximum marks were selected to participate in the final quiz.

The college team from Junagadh, Durg, Shirwal & SKnagar were got the highest marks & participated in the final quiz. Final quiz held at Seminar Hall, College of Veterinary Science & A.H., J.A.U., Junagadh at 2:30 p.m. The final quiz had five rounds contain questions from Veterinary Physiology in the form of true-false, MCQ, identify the picture & rapid fire round. All four teams participated with a brave heart & with the spirit of victory. At the end of the quiz, **Ms. Sunita Patel and Shivam Mathur** from College of Veterinary Science & A.H., Anjora, Durg, Chhattisgarh won the final quiz & Veterinary College, Shirwal was runners up. **Dr. J. R. Khan and Dr. A. K. Sharma gave the trophy & certificates to winner team. All participants were got the certificates.**

## **3. Five days Online Vocational Training on “Immunological Advancements in Male and Female Fertility”**

Department of Veterinary Physiology & Biochemistry in collaboration with Department of Veterinary Gynaecology and Obstetrics, College of Veterinary Science & A.H., Junagadh

Agricultural University, Junagadh organized five days of Online Vocational Training on “**Immunological Advancements in Male and female Fertility**” from 1<sup>st</sup> to 5<sup>th</sup> September, 2020. The training was organized under the aegis of Institutional Development Plan, Indian Council of Agricultural Research, New Delhi. **Dr. K. B. Vala** Associate Professor and Head, Department of Veterinary Gynaecology and Obstetrics was organizing secretary and **Dr. A. K. Sharma**, Associate Professor and Head, Department of Veterinary Physiology & Biochemistry, COVSAH, JAU, Junagadh was the Co-organizing secretary.

One Thousand one hundred and ninety-one (1191) distinguished speakers and participants from all over the nation including the scientists, teaching faculty and students of various Agricultural University, National Research Institutes including the host Junagadh Agricultural University (JAU) registered in this Online Vocational Training. All the eminent speakers, distinguished faculties and students from all over the nation joined this training program by online Zoom app (licensed version), YouTube, Facebook and JAU live links.

The Online Vocational Training mainly focused on recent advances related to reproductive Immunological Advancements in animal sciences. The program featured demonstrations, videos, problem-solving and panel discussion by experts with students and faculties on various areas of female and male reproductive and Immunological aspects. Eminent speakers from National institutes and Various Agricultural Universities all over the nation viz. **Dr. M. L. Madan** (Ex Vice Chancellor, DUVASU, Mathura, UP), **Dr. A. K. Gahlot** (Ex Vice Chancellor, RAJUVAS, Bikaner, Rajasthan), **Dr. F. S. Kavani** (Retd. Professor & Head, Department of Veterinary Gynaecology & Obstetrics, Veterinary College, AAU, Anand, Gujarat), **Dr. G Taru Sharma** (Principal Scientist& Head, P & C Division, IVRI, Izatnagar), **Dr. G. N. Purohit** (Professor & Head Department of Veterinary Gynaecology & Obstetrics, Veterinary College, RAJUVAS, Bikaner, Rajasthan), **Dr. A. J. Dhami** (Professor & Head, Department of Veterinary Gynaecology & Obstetrics, Veterinary College, AAU, Anand, Gujarat), **Dr. B. N. Suthar** (Professor & Head, Department of Veterinary Gynaecology & Obstetrics, Veterinary College, SDAU, SKnagar, Gujarat), **Dr. S. P. Ghuman** (Professor, TVCC, GADVASU, Ludhiana, Punjab), **Dr. M. T. Panchal** (Professor, Department of Veterinary Gynaecology & Obstetrics, Veterinary College, AAU, Anand, Gujarat), **Dr. Sarita U. Gulwane** (Professor & Head, Department of Veterinary Gynaecology & Obstetrics, Veterinary College, MVC, MAFSU, Parel, Mumbai, Maharashtra) and **Dr. Dilip Swain** (Assistant Professor, Department of Veterinary Physiology, DUVASU, Mathura, UP) thoroughly discussed their relevant topics before the participants.

#### **4. Five days Online Vocational Training on “Advancements in Physiological Function Tests in Domestic Animals and Pets”**

Five Days online vocational training program on “**Advancements in Physiological Function Tests in Domestic Animals & Pets**” was organized by the Department of Veterinary Physiology & Biochemistry at College of Veterinary Science and Animal Husbandry, Junagadh Agricultural University, Junagadh under Institutional Development Plan, Indian Council of Agricultural Research, New Delhi from 1<sup>st</sup> to 5<sup>th</sup> March, 2021. **Dr. A. K. Sharma**, Associate Professor and Head, Department of Veterinary Physiology & Biochemistry, COVSAH, JAU, Junagadh was the organizing secretary. Total six hundred and six (606) participants registered from across the country. The participants were faculties and students belonging to most of the



Veterinary Colleges in India. All the eminent speakers, distinguished faculties and students from all over the nation joined this training program by online Zoom app (licensed version), YouTube, Facebook and JAU live links.

The training featured demonstrations, videos, problem-solving and panel discussion by experts with students and faculties on various advancements in physiological function tests in domestic animals and pets. Eminent speakers from National institutes and Various Agricultural Universities all over the nation viz. **Dr. V. P. Vadodaria** (Former Dean & Professor of Physiology, SDAU, SKnagar, Dantiwada), **Dr. N. H. Mohan** (Principal Scientist & ICAR National Fellow, ICAR-National Research Centre on Pig, Rani, Guwahati, Assam), **Dr. Sunil Rastogi** (Prof. & Head, Dept. of Vet. Physiology & Biochemistry, COVS&AH, GBPUA&T, Pantnagar), **Dr. A. Sha. Arun** (Director- Research & Veterinary Operations, Bennerghatta Bear Rescue Centre, Bennerghatta Biological Park, Bengaluru), **Dr. Arunkumar Madan**, (Professor and Head, Department of Veterinary Physiology and Biochemistry, Veterinary College, DUVASU, Mathura, U.P.), **Dr. AshishMishra** (ICAR-NIANP, Adugodi, Bengaluru, Karnataka), **Dr. R .J. Padodara** (Assistant Professor, Department of Veterinary Physiology and Biochemistry, Veterinary College, JAU, Junagadh), **Dr. Ninam Jacob** (Professor and head, Department of Veterinary Physiology, Rajiv Gandhi Institute Education and Research, Puducherry), **Dr. Sunita Pareek** (Associate Professor & I/C Head, Department of Veterinary Physiology, CVAS, RAJUVAS, Bikaner, Rajasthan), **Dr. A. K. Shrama** (Associate Professor & Head, Department of Veterinary Physiology & Biochemistry, COVSAH), **Dr. K. S. Roy (Principal Scientist, Stress Physiology Lab., NIANP-ICAR, Adugodi, Bengaluru, Karnataka)**, **Dr. S. W. Bonde (Professor & University Head, Department of Veterinary Biochemistry, Nagpur Veterinary College, MAFSU, Nagpur, Maharashtra)** thoroughly discussed their relevant topics before the participants. All the participants received their certificates for participation in the training.

#### List of current year publications:

Sr. No.	Title of Paper	Full Name of Journal
1	Assessment of Blood Cells' Immunocompetence around Parturition in Gir Cows and Jaffrabadi Buffaloes	Veterinary Research International
2	Hematological assessment of healthy Gir cattle on an established farm	Journal of Entomology and Zoology Studies
3	Hematology of Jaffarabadi buffaloes on an established farm: Effect of various physiological parameters	Journal of Entomology and Zoology Studies
4	Bubaline Aortic Matrix: Histologic, Imaging, Fourier Transform Infrared Spectroscopic Characterization and Application into Cattle Abdominal Hernia Repair	Proceedings of the National Academy of Sciences, India Section B: Biological Sciences.
5	Preparation, characterization, and xenotransplantation of the caprine acellular dermal matrix.	Xenotransplantation.
6	Bubaline Diaphragm Matrix: Development and Clinical Assessment into Cattle Abdominal Hernia Repair	Brazilian archives of biology and technology

7	A study of histochemical distribution in full-term placental cotyledon of Gir cows and Jaffrabadi buffaloes	International Journal of Livestock Research
8	Gross Morphometric Study on Pineal and Pituitary Glands of Jaffarabadi Buffalo During Different Seasons of the Year	Indian Journal of Veterinary Anatomy
9	Breeding, Calf and Health Management Practices Opted by Buffalo Owners in Junagadh and Porbandar Districts of Gujarat: A Comparative Study	International Journal of Current Microbiology and Applied Sciences
10	Clinical presentation and therapeutic management of ivermectin toxicity in German Spitz Dog	Journal of Entomology & Zoology Studies

**Media Gallery:**

**Departmental Facilities and Routine Activities:**







**Glimpses of Departmental Activities:**

- 1. National Training on “Latest Advancement in Upstream Reproductive Physiological Techniques”**





## 2. Zonal (West) Level “Veterinary Physiology Quiz Competition - 2020”





**3. Five days Online Vocational Training on “Immunological Advancements in Male and Female Fertility”**



#### 4. Five days Online Vocational Training on “Advancements in Physiological Function Tests in Domestic Animals and Pets”







**Subject / Courses offered at UG / PG / Polytechnic:**

**A) No. of UG courses being offered:**

Sr. No.	Subject code	Subject Title	Credit	Year
<b>Veterinary Physiology</b>				
1	VPY	Veterinary Physiology	4+1=5	I year
<b>Veterinary Biochemistry</b>				
1	VBC	Veterinary Biochemistry	2+1=3	II year

**B) No. of PG courses being offered:**

Sr. No.	Course No.	Course Title	Credit
<b>Veterinary Physiology</b>			
1	VPY 601	Physiology of Digestion	2+1
2	VPY 602	Cardiovascular and Respiratory Physiology	2+1
3	VPY 603	Renal Physiology and Body fluid dynamics	2+1
4	VPY 604	Hematology	2+1
5	VPY 605	Vitamins and Minerals in Animal Physiology	2+0
6	VPY 606	Physiology of Animal Reproduction	2+1
7	VPY 607	Clinical Physiology	2+1
8	VPY 608	Neuromuscular Physiology	2+1
9	VPY 609	Chemical Bioregulation in Physiological Functions	3+0
10	VPY 610	Research Techniques in Veterinary Physiology	0+2
11	VPY 691	Master's Seminar	1+0
12	VPY 699	Master's Research	20

13	VPY 701	Applied Physiology of Body Fluids and Electrolytes	2+1
14	VPY 702	Physiology of Animal Behaviour	2+0
15	VPY 703	Comparative Physiology of Ruminant Digestion	2+1
16	VPY 704	Advances in Neuro-endocrinology	2+1
17	VPY 705	Myophysiology and Kinesiology	2+1
18	VPY 706	Avian Physiology	2+1
19	VPY 707	Physiology of Lactation	2+1
20	VPY 708	Advances in Environmental Physiology and Growth	2+1
21	VPY 709	Advances in Rumen Microbiology and Metabolism	2+1
22	VPY 710	Advances in Immunophysiology	2+1
23	VPY 711	Physiology of Stress	2+1
24	VPY 790	Special Problem	0+2
25	VPY 791	Doctoral Seminar I	1+0
26	VPY 792	Doctoral Seminar II	1+0
27	VPY 799	Doctoral Research	45
<b>Veterinary Biochemistry</b>			
1	VBC 601	Chemistry of Animal Cell	2+0
2	VBC 602	Techniques in Biochemistry	0+2
3	VBC 603	Applications of Genomics and Proteomics in Molecular Biology	2+0
4	VBC 604	Biochemistry of Biomolecules: Carbohydrates, Lipids and Membrane's structure	2+0
5	VBC 605	Enzyme Catalysis, Kinetics, Inhibition and Regulation	2+0
6	VBC 606	Metabolism-I: Carbohydrates and Lipids	2+0
7	VBC 607	Metabolism-II: Nucleic acid and Amino acids	2+0
8	VBC 608	Metabolism-III: Integration and Regulation	2+0
9	VBC 609	Central Dogma and Protein function	2+0
10	VBC 610	Clinical Biochemistry of Animals	2+1
11	VBC 611	Biochemical basis of diseases of Domestic animals	2+0
12	VBC 612	Endocrinology and Reproductive Biochemistry	2+0
13	VBC 613	Biochemical basis of animals production	2+1
14	VBC 691	Master's Seminar	1+0
15	VBC 699	Master's Research	20
16	VBC 701	Advances in Biochemistry of Ruminant Disorders	2+0
17	VBC 702	Advances in Enzymology	2+0

18	VBC 703	Advances in Clinical Biochemistry	0+2
19	VBC 704	Membrane Dynamics and Signal Transduction in Animal Cell	2+0
20	VBC 705	Methods in Protein Analysis	2+1
21	VBC 706	Nutritional Biochemistry	2+0
22	VBC 707	Advances in Intermediary Metabolism	2+0
23	VBC 708	Endocrine Control of Fuel Metabolism	2+0
24	VBC 709	Diagnostic Enzymology-I	2+0
25	VBC 710	Diagnostic Enzymology-II	2+0
26	VBC 711	Biochemistry of Development and Differentiation	2+0
27	VBC 712	Advances in Techniques in Biochemistry	1+1
28	VBC 713	Advances in Mineral and Vitamin Metabolism and Related Diseases	2+0
29	VBC 790	Special Problem	0+2
30	VBC 791	Doctoral Seminar I	1+0
31	VBC 792	Doctoral Seminar II	1+0
32	VBC 799	Doctoral Research	45

**C) No. of Polytechnic courses being offered:**

Sr. No.	Course No.	Course Title	Credit	Semester
1	APHY-111	Introductory Animal Physiology	3+1=4	I

**Contact us:**

**Dr. Arun Kumar Sharma**

M.V.Sc., Ph.D. (Veterinary Physiology)

Associate Professor and Head,

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## DEPARTMENT OF VETERINARY & ANIMAL HUSBANDRY EXTENSION

### Faculty:

S r. N o.	Name	Designation	e-mail	Phone	Joining year	Qualification	Experience in years	Publications (No. of research papers)
1	Dr. S.W. Sawarkar	Associate Professor & Head	<a href="mailto:drsuresndrasawarkar@gmail.com">drsuresndrasawarkar@gmail.com</a> , <a href="mailto:suresndrasawarkar@rediffmail.com">suresndrasawarkar@rediffmail.com</a>	8905967519	2012	B.V.Sc. & A.H., M.Sc., Ph.D. (IVRI) Vety. & A.H. Extension, M.B.A. (HRM), B.A. (Mass Communication & Journalism)	18	12
2	Dr. G.M. Chaudhari	Assistant Professor	<a href="mailto:drgirish2727@gmail.com">drgirish2727@gmail.com</a>	8980431993	2013	M.V.Sc (Vety. & A.H. Extension)	7	10

### About the Department:

Department of Veterinary & Animal Husbandry Extension was started in the year 2008 along with the establishment of College of Veterinary Science & Animal Husbandry, in Junagadh Agricultural University at Junagadh. At present, Department of Veterinary & Animal Husbandry Extension is independently functioning in teaching of undergraduate, postgraduate studies in Veterinary Science and Polytechnic Diploma in Animal Husbandry. This department equipped with necessary infrastructure as per VCI norms, audio-visual practical labs etc. used for

facilitating leadership development among students. The department co-ordinates with other departments of college regarding advisory services on Gujarat i-khedut portal and engaged with organizing skill development training programs for youths, farmers and para-vets as well as participation of the faculty members in various extension activities through Krushi Melas, Ratri Shibir, Goshtis, Krushi Mahotshav, ATMA lectures organized outside. Department is engaged in preparation of literatures and audiovisual aids for communication of farmers and to deliver radio talks on community radio.

**Research Areas:**

1. Adoption of animal husbandry practices
2. New technology used in animal husbandry
3. Animal husbandry training and education
4. Communication analysis of animal husbandry farmers
5. Socio-economic studies of animal husbandry farmers

**Research Projects: Nil**

**Achievement: Nil**

**Research Publications : Nil**

**Media Gallery**

**Photo Gallery**



**Audio-visual lab**



**Teaching/Research lab**



**Training Programme (2012)**



Participation in Training Programmes (2012-13)



Audio-visual laboratory for students



Leadership development in students

**Contact Us:**

**Address:** Dr. S.W. Sawarkar

Associate Professor & Head

Department of Veterinary & Animal Husbandry Extension

College of Veterinary Science & Animal Husbandry,

Junagadh Agricultural University,

Junagadh- 362001

District: Junagadh- (Gujarat)

**Phone:** 0285-2670722- (Extn: 114)

**Mobile:** 8905967519

**Email:** [surendrasawarkar@rediffmail.com](mailto:surendrasawarkar@rediffmail.com)

### Courses offered by the Department (optional/additional information)

#### UG Programme

Theory & Practical (VCI, MSVE, 2016 Rules)

Sr. No.	Course offered ( Third Year)	Credits
1	<b>Veterinary &amp; Animal Husbandry Extension Education</b>	3+1
	Theory	
	Unit-1: Livestock based livelihoods and their evolution	
	Unit 2: Extension education and development	
	Unit 3: Rural Sociology in veterinary extension	
	Unit 4: Transfer of Technology for livestock development	
	Unit 5: Communication and extension teaching methods	
	Unit 6 : Livestock economics and marketing	
	Unit 7: Livestock Entrepreneurship	
	Unit 8: Information and communication technology	
	Unit 9: Contemporary issues in livestock enterprises	
	<b>Practical</b>	
	Unit 1 and Unit -2	

#### PG Programme

Sr. No.	Code	Course Title	Credit
1	AHE 601	Fundamentals Of Veterinary And Animal Husbandry Extension	2+1
2	AHE 602	Communication For Livestock Development	1+1
3	AHE- 603	Diffusion And Adoption Of Animal Husbandry Practices	2+1
4	AHE-604	Extension Techniques and Audio Visual Aids	2+1
5	AHE-605	Animal Husbandry Programme Planning and Evaluation	2+1
6	AHE-606	Research Methodology in Veterinary and Animal Husbandry Extension	2+1

7	AHE-607	Social Psychology and Group Dynamics	2+1
8	AHE-608	Animal Husbandry Development Programmes	1+0
9	AHE-609	Developments in the Concept of Extension	1+0
10	AHE-610	Human Resource Management in Animal Husbandry Sector	2+1
11	AHE-611	Gender and Livestock Development	1+0
12	AHE-612	Information and Communication Technology in Livestock Development	1+1
13	AHE-691	Master Seminar	1+0
14	AHE-699	Master Research	20

### PhD Programme

Sr. No. .	Code	Course Title	Credit
1	AHE 701	Organizational Management	3+0
2	AHE-702	Farm Journalism and Public relations	2+1
3	AHE-703	Advance research techniques in social research	3+1
4	AHE-704	Training for human resource development	2+1
5	AHE-705	Polices and regulations in livestock sector	2+0
6	AHE-706	Educational technology	2+0
7	AHE-707	Dynamics of change	2+0
8	AHE-708	Organizational communication	2+1
9	AHE790	Special Problem	0+2
10	AHE-791	Doctoral Seminar-1	1+0
11	AHE-792	Doctoral Seminar-2	1+0
12	AHE-799	Doctoral Research	45



## DEPARTMENT OF VETERINARY MICROBIOLOGY

### Faculty

Sr. No.	Name	Designation	Email	Phone	Joining Year	Qualification	Experience in year	Publication (number of research paper)
1.	Dr. Bhavesh B. Javia	Associate Professor	bbjavia@yahoo.com	9662055453	2009	Ph.D.	12 Years	33
2.	Dr. Sanjay N. Ghodasara	Assistant Professor	dr_sanjayvet@yahoo.co.in	9662055459	2009	Ph.D.	12 Years	65
3.	Dr. Dilipsinh B. Barad	Assistant Professor	dr.dbbarad@rediffmail.com	9428441994	2012	Ph.D.	09 Year	20

### About the Department

The Department of Veterinary Microbiology was established since the inception of College of Veterinary Science and Animal Husbandry in the year 2008. The department is offering Under Graduate, Post Graduate and Doctoral courses to the students. Apart from the teaching, department also carry out investigation of various biological samples to strengthen the treatment and management of clinical cases at college clinic. The department is functioning under the administration of College of Veterinary Science and Animal Husbandry, KU, Junagadh.

### Objectives:

- To impart education in the subject of Veterinary Microbiology to the Under graduate and Post graduate students.
- To provide laboratory facilities for Microbial Isolation, Identification, Biochemical characterization and Antibiotic sensitivity of various biological samples received from college clinics.

- Department impart technical services during various clinical camps.
- To conduct various need base research studies.
- Expert lectures during seminar/symposium/krushimela/farmer's training etc.

### Research area

- Optimization of multiplex PCR and Real Time PCR for identification of MRSA from clinical samples.
- Molecular characterization of staphylococcal cassette chromosome *mec* (SSC*mec*) types of Methicillin-resistance Staphylococci and Extended Spectrum Beta-Lactamase (ESBL) producing *Escherichia coli* from Poultry
- Isolation and characterization of bacteriophage against multi drug resistant Staphylococci.
- Seroepidemiology, isolation and molecular detection of Brucella Infection from animals and *Peste-des-petits Ruminants Virus* in Sheep and Goats

### Project in brief

- The department has completed 15 technical programs funded by JAU and drawn out a fruitful recommendations for scientific as well as farmer's community in collaboration with other departments.

Completed projects					
Sr. No.	Name of the project	Duration of Project	Funding agency	Budget	PI and CO-PI of the projects
1.	Technical assistance for wild life health care, disease diagnosis and therapeutic management	2016-2019	Zoo, Junagadh	75 lacks	Dr. J. S. Patel (PI) Dr. B. S. Mathapati (Co. PI)

### Achievements

- The department has organized three ASCARD training and four collaborative training (with other departments) to strengthen the field veterinarians and para veterinarians.
- In last five years, Department has processed more than ten thousand biological samples received from college clinic as well as across the saurashtra region.
- Strengthened the department for M.V.Sc. and Ph. D. education and research work.
- Dr. B. S.Mathapati received the Dr.S. N. Singh memorial award for best research article
- Dr. B. B. Javia received the "Best Programme Officer-NSS" award
- Dr. V. R. Nimavat, Ex. M. V. Sc. Scholar received the "Poster Presentation Award"(First Position) in the national conference held at Anand, Gujarat

### Research publications

Sr. No.	Type of publication	Number
1	Books	1
2	Book chapter	7
3	Practical manual	8
4	Lead paper	2
4	Popular article/abstract	23
5	Research paper ( $\geq 6$ NAAS rating)	13
6	Research paper ( $< 6$ NAAS rating)	76

#### Department publications:

- B. B. Javia, B. S. Mathapati, D. B. Barad, S. N. Ghodasara, H. H. Savsani, A. R. Bhadaniya, D. T. Fefar, U. D. Patel and S. H. Sindhi. 2020. Bacteriological and Molecular Detection with Antimicrobial Resistance Pattern of Major Streptococcus spp. Isolated from Bovine Mastitis. *Int.J.Curr.Microbiol.App.Sci.* **9(11)**: 2443-2451
- A.S. Patel, A.R. Bariya, S.N. Ghodasara, J.A. Chavda, and S.S. Patil. 2020. Total carotene content and quality characteristics of pumpkin flavoured buffalo milk. *Heliyon***6**:1-5
- S. H. Sindhi, B. S. Mathapati, V. L. Parmar, S. Marandi<sup>1</sup>, M. Sumankumar, B. B. Javia, S. N.Ghodasara, J. B. Kathiriya, K. R. Bhedi and J. S. Patel. 2020. Prevalence of Campylobacter spp. Isolated from Poultry, Human and Environment in Junagadh District of Gujarat, India. *Int.J.Curr.Microbiol.App.Sci.***9(9)**: 3319-3326
- S. H. Sindhi, K. R. Bhedi, J. B. Kathiriya and S. N. Ghodasara. 2020. Crimean Congo Haemorrhagic Fever: An Emerging Tick-borne Metazoonosis. *Int.J.Curr.Microbiol.App.Sci.***9(6)**: 2368-2375
- J.B. Kathiriya, N.M. Shah, J.S. Patel, B.B. Javia, M.M. Tajpara, S.N. Ghodasara and D.B. Barad. 2020. Epidemiological surveillance of Dengue fever: An overview. *International Journal of Veterinary Sciences and Animal Husbandry.***5(6)**: 01-10.
- Jaysukh kathiriya, Nalikant M. Shah, Bhavesh J. Trangadia, Samiullakhan H. Sindhi, Bhavesh B. Javia and Sanjay Ghodasara. 2020. Lateral flow assay as a field test for sero-diagnosis of Brucellosis in small ruminants. *Ind J Vet Sci and Biotech.* **16 (2, 3 & 4)**: 40-44.

Harshad B. Patel, Urvesh D. Patel, Chirag M. Modi and Bhavesh B. Javia. 2020. Hematology and biochemical profile after repeated dose intravenous administration of marbofloxacin in broiler chicken. *Journal of veterinary pharmacology and toxicology*. **19 (1)**: 77-81.



Departmental diagnostic facilities



Biosafety cabinet for virological work



Laboratory area for molecular work



Lyophilized bacterial culture



Washing, sterilization and media preparation facilities at department



Practical class room for under graduate teaching activities

## DEPARTMENT OF VETERINARY PHARMACOLOGY AND TOXICOLOGY

### Faculty Profile

Sr. No.	Name	Designation	Email:	Mobile	Joining year	Qualification	Experience (Year)	Research papers
1	Dr. U. D. Patel	Associate Professor and Head	urvesh1981@yahoo.com	9725003818	2011 (JAU)	Ph.D.	10 + 04 (Other)	80
2	Dr. H. B. Patel	Assistant Professor	harshadvet@gmail.com	9558514761	2011 (JAU)	Ph.D.	10	48
3	Dr. C.M. Modi	Assistant Professor	chiragvets@yahoo.co.in	9428757409	2013 (JAU)	Ph.D.	7.5	68

### About the Department

The Department of Veterinary Pharmacology and Toxicology came in existence in 2010 during the third year of inception of the College of Veterinary Science and Animal Husbandry, Junagadh. The department progressed steadily by delivering the quality education to undergraduate and post-graduate students up to Doctorate level. The department extends the expertise to provide the education to students of Diploma in A.H., Junagadh. The department is recognized by ICAR to run the post-graduate programme in Veterinary Pharmacology and Toxicology. The modern **equipment** available in the department (HPLC, Preparatory HPLC, HPTLC, PCR etc.) and competent professors have been attracting students from other states of the country for study at post-graduate level. The department has nurtured the post-graduate and doctoral students who got the good position in professional life/career by becoming the scientists and entrepreneurs in India and abroad. The department is having Drug disposition Lab., Experimental pharmacology Lab., Ethnopharmacology Lab., and Molecular toxicology Lab. with modern instrumentation facility to work in the field of pharmacokinetics, toxicokinetics, pharmacodynamics, ethnopharmacology, toxicogenomics and pharmacogenomics. In addition, the department has developed the novel and unique facility of zebrafish laboratory to explore the toxicity of chemicals. The department also has a library facility for post-graduate students. A plan Research Scheme is also run by the department.

### Research Area

8. Pharmacokinetics and Toxicokinetics
9. Pharmacodynamics
10. Drug-drug interaction
11. Ethnopharmacology
12. Preclinical toxicity
13. Molecular toxicology
14. Molecular pharmacology

### Project Detail

<b>On going</b>					
<b>Sr. No.</b>	<b>Title of scheme</b>	<b>Duration</b>	<b>Funding Agency</b>	<b>Budget</b>	<b>Principal Investigator</b>
<b>1</b>	Evaluation of Pharmacological activity of Indigenous medicinal plants of Saurashtra region at Junagadh	Ongoing from 2013	Government of Gujarat (Plan scheme)	-	PI: Dr. U.D. Patel  Co. PI: Dr. H. B. Patel, Dr. B. B. Javia (Vet. Microbiology)

## **Achievements and List of Research Publications**

### **Awards/ Medals Received by the Faculty/ Students**

1. Best Poster Presentation Award (Second Position) by ISVPT (2020) - Dr. U. D. Patel
2. Best Oral Presentation Award by ISVPT (2019) - Dr. U. D. Patel
3. Prof. V.V. Ranade Young Scientist Award from ISVPT (2018) - Dr. H. B. Patel
4. Best Oral presentation of Research Paper from ISVPT (2018) - Dr. H. B. Patel
5. Prof. J. P. Trivedi award by GAAS award (2013) - Dr. U. D. Patel
6. INTAS young scientist from ISVPT (2009) - Dr. U. D. Patel

### **Other achievements**

- Total 64 medicinal plants of Saurashtra region were evaluated for various pharmacological activities like antibacterial, anti-inflammatory, antioxidant, antidiabetic and wound healing.
- Various *in vivo* studies have been carried out to explore the efficacy of extracts of plants in laboratory.
- Total 15 research recommendations were given for scientific community.
- Various herbal formulations have been evaluated for having pharmacological effects in laboratory animals and farm animals.
- P.G. students passed out from Department have been placed in Pharma sector (Cadila healthcare, Dabur, Torrent Pharma, Jay Research Foundation etc), Government and non-government organization.
- Power Point Presentations have been prepared for all units of UG and P.G. courses
- A book on short questions for U.G. and P.G. students has been published.
- Class notes for all courses are available with faculty members
- Practical manuals of all courses have been prepared.

### **List of Recent Research Publications(2019-20)**

6. Patel, H.B., Patel, U.D., Modi, C.M., Ladumor, V.C., Makwana, C.N. and Rao, S.S. (2020). Pharmacokinetics of marbofloxacin following oral administration in piperine, quercetin alone and both in combination pretreated broiler chickens. *Indian Journal of Animal Research*. DOI: 10.18805/IJAR.B-4300. (NASS Rating -6.44)
7. V. B. Chauhan, C. M. Modi, U. D. Patel, and H. B. Patel. (2020). The effect of piperine pre-conditioning on the pharmacokinetics of orally administered marbofloxacin in rats. *Veterinarski Arhiv*. 90 (1):69-75. (NAAS Rating -6.49)
8. U. D. Patel, P. R. Bhatt, K. B. Pandya, H. B. Patel & C. M. Modi. (2020). Cadmium induced oxidative stress-mediated pathophysiological alterations in chickens and their amelioration

by polyherbal mixture enriched feed. *Indian Journal of Traditional Knowledge*. 20 (1): 41-53. (NASS Rating -6.92)

9. Patel, H. B., Patel, U. D., Modi, C. M., Fefar D. T. and Bhadaniya A. R. (2020). Effect of piperine and quercetin pretreatment on safety profile of marbofloxacin after repeated oral administration in broiler chickens. *Annals of Phytomedicine*. 9(2):283-292. (NASS Rating -5.95)
10. Patel, H. B., Patel, U. D., Modi, C. M. and Javia B. B. (2020). Hematological and biochemical profile after repeated dose intravenous administration of marbofloxacin in broiler chickens. *Journal of Veterinary Pharmacology and Toxicology*, 19(1): 77-81 (NAAS Rating -4.43)
11. Harshad B. Patel, Urvesh D. Patel, Basavaraj S. Mathapati, Chirag M. Modi. (2019). Effect of piperine and quercetin alone or in combination with marbofloxacin on CYP3A37 and MDR1 mRNA expression levels in broiler chickens. *Research in Veterinary Science*. 126:178-183. (NASS Rating -7.89).
12. P. R. Bhatt, Kajal B. Pandya, U. D. Patel, H. B. Patel and C. M. Modi (2019). Survey on Ethnoveterinary Practices around Junagadh, Gujarat, India. *Indian Journal of Pharmaceutical Sciences*. 81(1):161-167. (NASS Rating -6.72).
13. C.N. Makwana, S.S. Rao, U.D. Patel, C.M. Modi, H.B. Patel and D.T. Fefar (2019). Status of Oxidative Stress in Cerebral Cortex and Testes, Acetylcholinesterase Activity in Cerebral Cortex and Sperm Parameters in Cadmium-Exposed Rats. *Indian Journal of Animal Research*. B-3844:1-9. (NASS Rating -6.44).
14. Vipul B. Chauhan, Chirag M. Modi, Harshad B. Patel and Urvesh D. Patel. (2019). Evaluation of pathophysiological alterations in rats administered with marbofloxacin alone and with piperine pretreatment. *Annals of Phytomedicine*. 8(1): 178-184. (NASS Rating -5.95).
15. Punit R. Bhatt, Urvesh D. Patel, Chirag M. Modi, Kajal B. Pandya and Harshad B. Patel. (2019). Thin-layer chromatography and *in vitro* free radical scavenging activity of few medicinal plants from the surroundings of Junagadh, Gujarat, India. *Annals of Phytomedicine* 8(1): 45-55. (NASS Rating -5.95).
16. Punit R. Bhatt, Kajal B. Pandya, Urvesh D. Patel, Chirag M. Modi, Harshad B. Patel and Bhavesh B. Javia. (2019). Antidiabetic, antioxidant and anti-inflammatory activity of medicinal plants collected from nearby area of Junagadh, Gujarat. *Annals of Phytomedicine* 8(2): 75-84. (NASS Rating -5.95).
17. Kajal B. Pandya, Harshad B. Patel, Punit R. Bhatt, Urvesh D. Patel and Chirag M. Modi (2019). In vitro antibacterial activity of sixteen medicinal plants collected from nearby region of Junagadh, Gujarat (India). *The Pharma Innovation Journal*. 8(3): 662-667. (NASS Rating -5.23).
18. Harshad B. Patel, Urvesh D. Patel, Chirag M. Modi, Punit R. Bhatt and Kajal B. Pandya (2019). In vitro anti-diabetic activity of various indigenous medicinal plants of Junagadh region (Gujarat, India). *The Pharma Innovation Journal*. 8(4): 1133-1138. (NASS Rating -5.23).
19. Chirag M Modi, Urvesh D Patel and Harshad B Patel (2019). Effect of piperine preconditioning on pharmacokinetics of marbofloxacin following subcutaneous administration in rats. *The Pharma Innovation Journal*. 8(9): 259-264. (NASS Rating -5.23).
20. S.S. Rao, C.N. Makwana, U.D. Patel, V.C. Ladumor, H.B. Patel and C.M. Modi (2019). Oxidative Stress Mediated Dose-Dependent Pathophysiological Alterations in Liver, Kidney,

Heart and Intestine of Rats Exposed to Different Levels of Cadmium Chloride. *International Journal of Current Microbiology and Applied Sciences*. 8(1): 393-409.

21. Chirag M. Modi, Punit R. Bhatt, Kajal B. Pandya, Harshad B. Patel and Urvesh D. Patel. (2019). Comparative Evaluation of *in vitro* Anti-Inflammatory Activity of Different Extracts of Selected Medicinal Plants from Saurashtra Region, Gujarat, India. *International Journal of Current Microbiology and Applied Sciences* 8(5): 1686-1698.
22. Shivani L Solanki, Chirag M Modi, Harshad B Patel, Urvesh D Patel and Dixita H Bhadarka. (2019). Phytochemical screening and thin-layer chromatography of six medicinal plants from the surroundings of Junagadh, Gujarat, India. *Journal of Pharmacognosy and Phytochemistry*. 8(4): 3122-3126.

#### Activities/Trainings/Seminars/Workshops organized by Department

1. National Seminar cum Training on “Applications of advanced instrumentation in drug discovery and role of veterinarian in biomedical science” organized by Department of Veterinary Pharmacology and Toxicology, College of Veterinary Science and A.H., Junagadh Agricultural University, Junagadh, JAU on 4<sup>th</sup> January, 2019 under IDP, ICAR.
2. National Training on “Automation and advance in Chromatography” organized by Department of Veterinary Pharmacology and Toxicology, College of Veterinary Science and A.H., Junagadh Agricultural University, Junagadh, JAU during 6<sup>th</sup> to 7<sup>th</sup>, September 2019 under IDP, ICAR.

#### Information of Courses offered Under-graduate Programme (As per VCI MSVE, 2016)

Sr. No.	Course Title	Credit
1	<b>Veterinary Pharmacology and Toxicology</b>	4+1
	Theory	
	Unit 1: General Pharmacology	
	Unit 2: Drugs Acting on ANS	
	Unit 3: Drugs Acting on CNS	
	Unit 4: Drugs Acting on Different body Systems	
	Unit 5: Veterinary Chemotherapy	
	Unit 6: Veterinary Toxicology	
	Practical	
	Unit 1: General Pharmacology	
	Unit 2: ANS Pharmacology	
	Unit 3: CNS Pharmacology	
	Unit 4: Veterinary Chemotherapy	
	Unit 5: Veterinary Toxicology	

#### Post-graduate Programme

Sr. No.	Code	Course Title	Credits
1.	VPT 601	General Pharmacology	2+0=2
2.	VPT 602	Autonomic and Autacoid Pharmacology	2+1=3
3.	VPT 603	CNS Pharmacology	2+1=3



4.	VPT 604	Digestive and Respiratory Pharmacology	2+0=2
5.	VPT 605	Cardiovascular and Renal Pharmacology	2+0=2
6.	VPT 606	Endocrine and Reproductive Pharmacology	2+0=2
7.	VPT 607	Chemotherapy	2+1=3
8.	VPT 608	Toxicology of Xenobiotics	2+1=3
9.	VPT 609	Toxicology of Plants and Toxins	2+0=2
10.	VPT 610	Pharmacological Techniques	1+1=2
11.	VPT 611	Techniques in Toxicology	1+1=2
12.	VPT 612	Ethnopharmacology	2+0=2
13.	VPT 691	Master Seminar	1 + 0
14.	VPT 699	Master Research	20

#### Ph.D. Programme

Sr. No.	Code	Course Title	Credits
1.	VPT 701	Advances in Neuropharmacology	2+0=2
2.	VPT 702	Autacoid Pharmacology	1+0=1
3.	VPT 703	Pharmacology of Herbal Drugs	2+1=3
4.	VPT 704	Drug Metabolism	2+0=2
5.	VPT 705	Molecular Pharmacology	2+0=2
6.	VPT 706	Pharmacokinetics	2+1=3
7.	VPT 707	Pharmacogenomics	2+0=2
8.	VPT 708	Immunopharmacology	1+0=1
9.	VPT 709	Molecular Toxicology	2+0=2
10.	VPT 710	Clinical Pharmacology	1+1=2
11.	VPT 711	Clinical Toxicology	2+1=3
12.	VPT 712	Ecotoxicology	2+0=2
13.	VPT 713	Regulatory toxicology	2+1=3
14.	VPT 790	Special problem	0+ 2=2
15.	VPT 791	Doctoral seminar I	1+0=1
16.	VPT 792	Doctoral seminar II	1+ 0=1
17.	VPT 793	Doctoral research	45

#### Infrastructure Facility and Major Equipment available

Sr. No.	Name of instrument
1.	Preparative High Performance Liquid Chromatography (Prep-HPLC) – Shimadzu
2.	High Performance Liquid Chromatography (HPLC) – Shimadzu
3.	HPTLC with accessories – Camag
4.	PCR Machine-Eppendorf
5.	UV visible spectrophotometer
6.	Nitrogen Evaporator with accessories

7.	Solid Phase extraction Assembly
8.	High Precision Balance
9.	Portable ECG
10.	Digital manometer
11.	Ultrasound homogenizer
12.	Rotary Evaporator
13.	Soxhlet apparatus
14.	Laminar Air Flow
15.	Refrigerated centrifuge
16.	Rotarod apparatus
17.	Digital plethysmometer
18.	Digital Actophotometer
19.	Analgesiometer
20.	Cooks Pole Climbing response apparatus
21.	Binocular Microscopes
22.	Digital Oven and Incubator
23.	Fully Automatic Autoclave
24.	Digital Water Bath Incubator Shaker
25.	Deep Freeze (-20 °C)

### Photo gallery



Inaugural session



Technical session

National Seminar cum Training on Applications of advanced instrumentation in drug discovery and role of veterinarian in biomedical science



Inaugural session  
National Training on Automation and advance in Chromatography



Technical session

National Training on Automation and advance in Chromatography



Dr. Odemari Stephen Mbuya and Dr. **Shaikh** from Florida Agril. And Mechanical University, USA (2015)



Preparative HPLC (Drug Disposition Laboratory)



**HPLC with UV and Fluorescent detectors (Drug Disposition Laboratory)**



**HPTLC (Ethno-pharmacology Laboratory)**



**Molecular Toxicology Laboratory**



**Pharmacology and Toxicology Laboratory**



**Laboratory Animal House facility (Rodent and Zebrafish)**



**Departmental Library**

**Contacts Us:**

Dr. U. D. Patel,  
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e-mail: [urvesh1981@yahoo.com](mailto:urvesh1981@yahoo.com)

## DEPARTMENT OF VETERINARY PATHOLOGY

### Faculty profile-

S r. N o.	Name	Designation	Email	Mobile	Year of Joining	Qualification	Experience in year	Research paper published
1	Dr. A.R. Bhadaniya	Associate Professor	<a href="mailto:arbhadaniya@gmail.com">arbhadaniya@gmail.com</a>	942738 2372	2009	Ph.D.	12	36
2	Dr. B.J. Trangadiya	Associate Professor	<a href="mailto:drbjt77@gmail.com">drbjt77@gmail.com</a>	999894 9710	2018	Ph. D.	16	35
3	Dr. V.A. Kalaria	Assistant Professor	vppcovsah@gmail.com	942777 2774	2009	M.V.Sc.	12	32
4	Dr. D.T. Fefar	Assistant Professor	drdtfefar@gmail.com	972563 2840	2012	Ph. D.	08	36

### About department:

Department of Veterinary Pathology shoulders responsibilities of teaching, research and related extension activities. The Department imparts theoretical and practical knowledge in the field of Veterinary Pathology to undergraduate and postgraduate students. Besides, teaching, research and diagnostic investigations are also carried out on diseases and ailments affecting farm, companion and wild animals and poultry through post-mortem examinations, histopathology, clinical pathology and cytopathology. The department also provides post mortem examination, clinical pathology and histopathology services to various governmental and non-governmental organizations viz; animal husbandry departments, field veterinarians, Zoo, forest departments, etc. The department caters the need of poultry farmers of Saurashtra region of the state through pathological and molecular investigation of important diseases affecting broiler and layer birds. We also provide preventive and therapeutic measures to curb the diseases in birds, thus reducing economic losses to the poultry farmers.

Faculty members of the department recorded virtual video lectures for ICAR IDP-NAHEP Project. These lectures will be uploaded on ICAR Education Portal and students can watch these videos and gain the knowledge of the subject. We also delivered radio talk on topics relevant to animal husbandry and useful to the farmers in vernacular language.

The Department supports and provide technical helps to postgraduate students from other departments of the colleges viz; TVCC, Veterinary pharmacology & toxicology, Veterinary microbiology, Animal nutrition etc.

### Research Area:

- Immunohistochemistry
- Molecular Pathology
- Neuropathology
- Ocular Pathology

### Projects Completed:

1	Evaluation of internal parasitic load from faecal sample at different gaushalas/pajarapol
2	Aetiopathological studies on broiler mortality in and around Junagadh
3	Technical assistances for wildlife healthcare, disease diagnosis and therapeutic management

### Achievements:

- ❑ PhD Thesis work entitled “Studies on Sero-epidemiology, Diagnostic Approaches and Pathology of Caprine Brucellosis” appreciated by The Gujarat Association of Agricultural Sciences (GAAS) for the year 2016-17 on October 03, 2020. –**Dr. B.J. Trangadia**
- ❑ Awarded **Second** Prize (Category-III Faculty/Researchers) in the online Essay Writing Competition on “Challenges in Forensic Veterinary Pathology” organized by the Department of Veterinary Pathology, Rajiv Gandhi Institute of Veterinary Education and Research, Puducherry, India during June, 2020 (**Result declared on 11.08.202 through email**). –**Dr. B.J. Trangadia**
- ❑ Chauhan JM, **Fefar DT, Bhadaniya AR, Trangadia BJ, Kalaria VA**, Singh VK, Kumbhani TR, Mathakiya SA and Padaliya NR. (2020). Studies on proliferation biomarkers in squamous cell carcinoma of bullock horn by immunohistochemistry and its correlation with histopathology. Research Paper has been adjudged for **Dr. H. R. Mishra Award for Best Oral Presentation by Lady Veterinarian** during IAVP Zonal Conference and National Symposium on “Recent advances in diagnostic pathology for emerging and re-emerging diseases in livestock, poultry under farming conditions and wildlife” organized jointly by IAVP Jharkhand Chapter and the Department of Veterinary Pathology, RVC, BAU, Kanke, Ranchi during February 22-23, 2020 pp. 62.
- ❑ Kumbhani TR, **Fefar DT, Trangadia BJ, Bhadaniya AR, Kalaria VA**, Mathakiya SA and Vadaliya JV. (2020). Immunohistochemical profiling of squamous cell carcinoma using Proliferative Cell Nuclear Antigen (PCNA) and Ki-67 prognostic biomarkers. Research Paper has been adjudged for **Best Oral Presentation Award** in technical session on “Applied Diagnostic Techniques” at IAVP Zonal Conference and National Symposium on “Recent advances in diagnostic pathology for emerging and re-emerging

diseases in livestock, poultry under farming conditions and wildlife” organized jointly by IAVP Jharkhand Chapter and the Department of Veterinary Pathology, RVC, BAU, Kanke, Ranchi during February 22-23, 2020 pp. 216.

- Raval RJ, Singh VK, **Trangadia BJ**, Dhami AJ and Kavani FS. (2019). Ovarian Dynamics, Blood Biochemical and Hormonal Profile among Double Ovsynch treated Conceived and Non-conceived Anestrus Jaffarabadi Buffaloes. Research Paper has been adjudged for **Best Oral Award** in technical session on “Animal Disease Diagnosis, Health and Reproduction” at VII Annual convention of SVSBT and National Seminar on “Biotechnological Advances for Improving Animal Health and Productivity” held at College of Veterinary Science & AH, NAU, Navsari-396450, Gujarat during December 5-6, 2019 pp. 99.
- Conferred *IAVP Achievement Award-2015* for the *Best Farm Animal Pathologist* by the Indian Association of Veterinary Pathologists (IAVP) during the Annual Conference held at Gannavaram, Andhra Pradesh during December 3-5, 2015–**Dr. B.J. Trangadia**
- Awarded *Professor J. P. Trivedi Award* sponsored by Shri Hari Om Ashram, Nadiad for research contribution to Animal Science in the field of “Dynamics of fluoride occurrence in relation to fluorosis in animal health in semi arid zone of North Gujarat” for the year 2003. –**Dr. B.J. Trangadia**
- Awarded *Late Professor VAJ Pinto Cash Prize* for securing the highest OGPA in Veterinary Medicine subject of BVSc & AH Examination held in September, 1999. –**Dr. B.J. Trangadia**
- Awarded *Best Internee Award* during 1998-1999. –**Dr. B.J. Trangadia**



**Courses offered at UG /PG:****UG courses:**

<b>New Syllabus as per VCI (MSVE- 2016)</b>				
<b>Sr. no.</b>	<b>Course Title</b>		<b>Credits</b>	<b>Year</b>
1	Veterinary Pathology		4 + 2 = 6	Second
<b>Old Syllabus as per VCI</b>				
<b>Sr. no.</b>	<b>Course no.</b>	<b>Course Title</b>	<b>Credits</b>	<b>Semester</b>
1	VPP-211	General Vet. Pathology	1+1=2	III
2	VPP-221	Systemic Vet. Pathology	2+1=3	IV
3	VPP-311	Special Vet. Pathology	2+1=3	V
4	VPP-321	Avian Pathology	1+1=2	VI
5	VPP-322	Aquatic Animal Diseases, Health care and Management)	1+1=2	VI

**P.G. Courses:**

<b>Sr. no.</b>	<b>Course no.</b>	<b>Course Title</b>	<b>Credits</b>
1	VPP-601	General Pathology	2+1
2	VPP-602	Techniques in Pathology	1+1
3	VPP-603	Animal Oncology	1+1
4	VPP-604	Clinical Pathology	1+2
5	VPP-605	Necropsy Procedures and Interpretations –I	0+1
6	VPP-606	Necropsy Procedures and Interpretations –II	0+1
7	VPP-607	Systemic Pathology	2+1
8	VPP-608	Pathology of Infectious Diseases of Domestic Animals	2+1
9	VPP-609	Toxicopathology	2+1
10	VPP-610	Avian Pathology	2+1

11	VPP-611	Pathology of Laboratory Animals, Fish and Wild Animals	2+1
12	VPP-612	Veterolegal Pathology	1+0
13	VPP-691	Master's Seminar	1+0
14	VPP-699	Master's Research	20
15	VPP-701	Pathology of Nutritional and Metabolic Disturbances	2+1
16	VPP-702	Advances in Toxicopathology	2+1
17	VPP-703	Advances in Diagnostic Pathology	1+2
18	VPP-704	Ultrastructural Pathology	1+1
19	VPP-705	Immunopathology	2+1
20	VPP-706	Pathology of Important and Emerging Diseases of Pets and Livestock	1+1
21	VPP-707	Advances in Avian Pathology	2+1
22	VPP-708	Pathology of Fungal Diseases	2+1
23	VPP-709	Molecular Pathology of Cell Injury	2+1
24	VPP-710	Experimental Pathology	1+1
25	VPP-790	Special Problem	0+2
26	VPP-791	Doctoral Seminar-I	1+0
27	VPP-792	Doctoral Seminar-II	1+0
28	VPP-799	Doctoral Research	45

**Infrastructure Facility and Major Equipment available at department:  
Infrastructure facilities: Total built-up area: 663.03sq.mt.**

Office	Professor room – 1
	Associate Professor room – 1
	Assistant Professor room – 1
	Staff room – 1
Laboratory	Museum – 1
	Clinical Pathology Lab. – 1
	Post graduate Lab. - 1
	Post-mortem room - 1

	Histopathology Lab. - 1
	Clinical Service Lab. - 1
	Store – 1

**Major equipment available at department:**

Sr. No.	Name of equipment
1	Automatic blood analyser
2	Automatic serum analyser
3	Semi-automatic microtome
4	Manual microtome
5	Tissue embedding system
6	Fluorescent Microscope
7	Phase contrast microscope
8	Digital Microscope
9	Stereo-zoom microscope
10	Semi-automatic serum analyser
11	Cryostat

**Laboratories:**

Sr. No.	Name of Laboratory
1	Clinical Pathology Lab. – 1
2	Post graduate Lab. - 1
3	Post-mortem room - 1
4	Histopathology Lab. - 1
5	Clinical Service Lab. - 1

**No. of Master and PhD Students Passed Out from Department:**

Sr. No.	Students obtained postgraduate degree	Total No.

1	M.V.Sc.	04
2	Ph.D.	01

**Details of PhD / M.V.Sc.Students:**

Sr. No.	Name of Students	Title of thesis	Name of Guide	Year of Completion	Degree
1	Dr. A. R. Bhadaniya	Etio-pathological and pro-inflammatory cytokine expression studies on endometritis in buffaloes	Dr. M. C. Prasad	2018	Ph.D.
2	Dr .M.H. Chhatrola	Etiopathological study of respiratory tract infection in broiler chickens in and around Junagadh	Dr. D.T. Fefar	2019	M.V.Sc.
3	Dr . J.M.Chauhan	Studies on proliferation biomarkers in squamous cell carcinoma of bullock horn by immunohistochemistry and its correlation with histopathology	Dr. D.T. Fefar	2019	M.V.Sc.
4	Dr. Tapan Kumbhani	Cytological, histopathological and immunohistochemical studies on canine tumors	Dr. D.T. Fefar	2020	M.V.Sc.
5	Dr. Sakir Mathukiya	Etiopathomorphological studies of ascites syndrome in broiler chicken of Saurashtra region	Dr. D.T. Fefar	2021	M.V.Sc.

## Photographs of Laboratories



### 6. Veterinary Parasitology

#### Faculty profile-

S r. N o.	Name	Designat ion	Email	Phone No.	Join ing Yea r	Qualific ation	Experi ence	Publicat ion (No. of publicat ions)
<b>1</b>	Dr. Binod Kumar	Asst. Professor & Head	drkumarbinod@g mail.com	972556 0977	2012	Ph.D.	9 years	<b>51</b>
<b>2</b>	Dr. B. J. Thakre	Asst. Professor	drbhupendrakum arthakre@gmail. com	951025 3087	2015	MVSc	5 years	<b>33</b>

## About the Department:

Since the establishment of College of Veterinary Science and Animal Husbandry, Junagadh in 2008, the department is functioning under the administration of it with the following objectives.

1. To impart education in the subject of Veterinary Parasitology to the Diploma in Animal Husbandry, Under Graduate and Post Graduate students.
2. To undertake research activities on parasitological problems of livestock.
3. To undertake the extension of the subject to the farmers in co-operation with the government departments and agencies concerned.

Department of Veterinary Parasitology is having three laboratories (Entomology & Acarology cum Clinical Parasitology Laboratory, Protozoology cum Molecular Parasitology Laboratory and Helminthology laboratory) which can accommodate 25-30 students at a time to do practical. Laboratories are having all necessary equipment, consumables and teaching aids like audio-visual aid, charts, etc for UG and Diploma studies. For advance research and development Molecular Parasitology Laboratory is well equipped with advance instrumentation. It has facilities for DNA/RNA isolation, Polymerase Chain Reaction (PCR), Recombinant DNA technology, ELISA and digital microscopy. At present, department has developed and standardized the PCR based test for the identification of various haemoparasites such as *Babesia*, *Theileria*, *Ehrlichia*, *Hepatozoon*, *Haemobartionella*, *Trypanosoma* and *Anaplasma* at both genus and species level. Another attractive entity is Parasitology Museum which has more than 50 different kinds of parasite specimens. On need basis, department also organize training programme for veterinary officer, participate in clinical camp, Krishi Mahotshav, etc. As the part of academic activities, faculties of the departments are very active in publications too. Till now 4 books, 5 book chapters, 5 laboratory manuals, 3 training manuals and many scientific publications were made in both national and International Journals.

## Research Area

- Epidemiological studies of parasitic diseases in the animals of an area coming under university jurisdiction.
- Research to develop user friendly, more reliable, specific and sensitive test for parasitic disease diagnosis especially haemoprotozoans at field level.
- Immuno-prophylaxis against parasitic diseases.

## Research Projects

Completed					
Sr. No.	Departmental Projects Completed	Period	Funding Agency	Grant (in. Rs.)	Investigator
1	Technical assistance for wild life health care, diseases diagnosis and therapeutic management	2016-2018	Sakkarbau g Zoo Management Advisory Society, Junagadh	75 lakhs	PI- Dr. J. S. Patel Co-PI Dr. V. D. Dodia Dr. D. T. Fefar Dr. Binod Kumar Dr. B. S. Mathapati

## Achievements

- Dr. J. P. Dube Young Scientist Award 2010- Dr. Binod Kumar
- 1st Prize in Best Poster Presentation Award 2017- Dr. Binod Kumar
- Laboratory protocol developed and optimized for identification of *Babesia*, *B. bigemina*, *B. canis*, *B. gibsoni*, *B. cabballi*, *Theileria annulata*, *T. orientalis*, *Theileria equi*, *Ehrlichia spp.*, *Ehrlichia canis*, *Anaplasma spp.*, *Anaplasma marginale*, *Hepatozoon spp.*, *H. canis*, *H. felis*, *Haemobartonella felis*, *Trypanosoma evansi* through polymerase chain reaction (PCR).
- Developed LAMP assay for *Trypanosoma evansi* identification.
- Developed and optimized Blood Lysate (BL) methods to reduce the PCR test cost about 92 percent.

## Research Publication (current year 2020-21)

1. Thakre, B. J., Kumar, B., Brahmhatt, N. N., Parmar, V. L. and Gamit, K. 2020. Management of scabies in rabbits using Ivermectin. *Journal of Veterinary Parasitology*, 34(1): 69-70. [NAAS-2.81]
2. Thakre, B. J., Kumar B., Brahmhatt, N. N. 2020. Therapeutic management of demodicosis in a horse. *Intas Polivet*, 20(2): 262-264. [NAAS-4.79]
3. Kumar, B., Manjunathachar, H.V. and Ghosh, S. 2020. A review on *Hyalomma* species infestations on human and animals and progress on management strategies. *Heliyon*, 6(12): e05675.
4. Kumar, B., Maharana, B.R., Brahmhatt, N., Thkare, B.J. and Parmar, V.L. 2021. Development of a loop mediated isothermal amplification assay based on RoTat 1.2 gene for detection of *Trypanosoma evansi* in domesticated animals *Parasitology Research*, Epub ahead of print 7118 [NAAS-7.64]
5. Brahmhatt, N.N., Kumar, B., Thkare, B.J. and Bilwal, A.K. 2021. Haemato-biochemical characterization of fasciolosis in Gir cattle and Jaffrabadi buffaloes. *Journal of Parasitic disease*, 1342 [NAAS-4.65]
6. Parthasarathi, B.C., Kumar, B., Nagar, G., Manjunathachar, H.V., de la Fuente, J. and Ghosh, S. 2021. Analysis of genetic diversity in indian isolates of *Rhipicephalus microplus* based on Bm86 gene sequence. *Vaccines (Basel)*, 9(3):194 (1-15). [NAAS 2021- 10.09]
7. Maharana, B. R., Gupta, S., Gupta, S., Ganguly, A., Kumar, B., Chandratre, G.A. and Bisla, R.S. 2021. First Report of molecular and phylogenetic analysis of *Physaloptera praeputialis* in naturally infected stray cats from India. *Parasitology Research*. Epub ahead of print. PMID: 33893552. [NAAS-7.64]

**Media Gallery**  
**Photo Gallery**

Glimpse of ASCAD training



Glimpse of IDP training







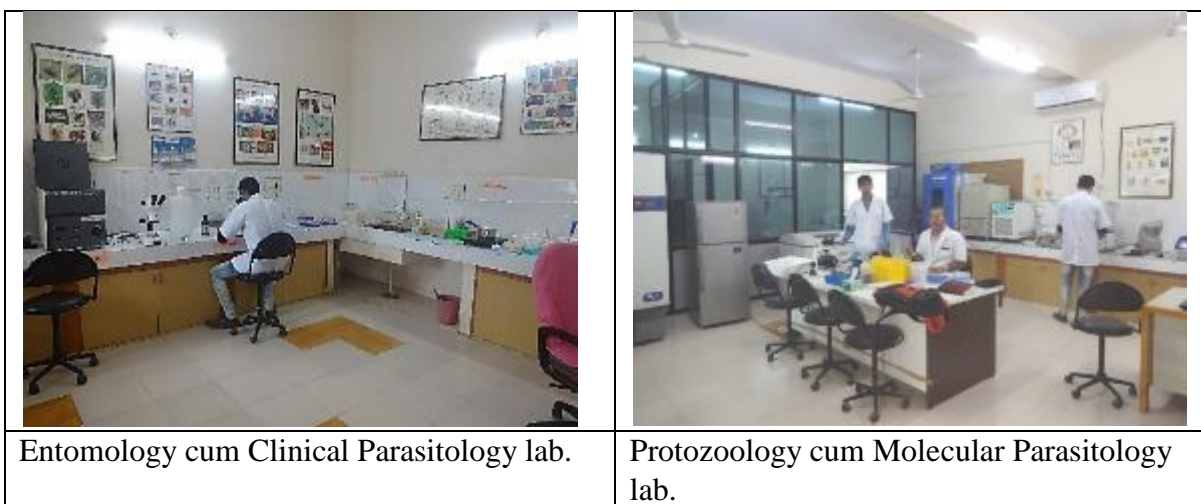
### Photographs of Laboratories



Parasitological Museum



Helminthology lab.



Dr. Binod Kumar, M.V.Sc., Ph.D.  
Assistant Professor and Head  
Department of Veterinary Parasitology  
College of Veterinary Science and Animal Husbandry  
Junagadh-362001, Gujarat, India.

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Mobile : 9725560977  
E-mail : [drkumarbinod@gmail.com](mailto:drkumarbinod@gmail.com)

### **Courses offered by the Department (optional/additional information)**

#### **UG Programme**

#### **Theory and Practical (MSVE- 2016)**

<b>Sr. No.</b>	<b>Course offered</b>	<b>Credits</b>
१	Veterinary Parasitology	3+2
	Theory	
	Unit I : General Veterinary Parasitology	
	Unit II : Trematodes and Cestodes of Veterinary Importance	
	Unit III: Nematodes of Veterinary Importance	
	Unit IV: Arthropods of Veterinary Importance	
	Unit V : Protozoa of Veterinary Importance	
	Practical	
	Unit I : General Veterinary Parasitology	
	Unit II : Trematodes and Cestodes of Veterinary Importance	
	Unit III: Nematodes of Veterinary Importance	
	Unit IV: Arthropods of Veterinary Importance	
	Unit V : Protozoa of Veterinary Importance	

PG Programme

Sr. No.	Course No.	Course Title	Credits
1.	VPA-601	Veterinary helminthology-I	2+1
2.	VPA-602	Veterinary helminthology-II	2+1
3.	VPA-603	Veterinary entomology & acarology	2+1
4.	VPA-604	Veterinary protozoology	2+1
5.	VPA-605	Parasitological techniques	0+2
6.	VPA-606	Clinical parasitology	1+1
7.	VPA-607	Trends in control of livestock and poultry parasites	1+1
8.	VPA-608	Immuno-parasitology	2+1
9.	VPA-609	Parasitic zoonoses	2+0
10.	VPA-610	Parasites of zoo and wild animals	2+1
11.	VPA-611	Malacology	1+1
12.	VPA 691	Master's seminar	1+0
13.	VPA 699	Master's research	20

PhD Programme

1.	VPA 701	Applications of Remote Sensing and Geographic Information System in Parasitology	1 + 2
2.	VPA 702	Molecular Diagnostics and Vaccine Development in Parasitology	2 + 1
3.	VPA 703	Host Parasite Interactions	2+0
4.	VPA 704	Advances in Protozoology	2+1
5.	VPA 705	Advances in Helminthology-I	2+1
6.	VPA 706	Advances in Helminthology-II	2+1
7.	VPA 707	Advances in Entomology and Acarology	2+1
8.	VPA 708	<i>In Vitro</i> Cultivation of Parasites	1+2
9.	VPA 709	Emerging and Re-Emerging Parasitic Diseases	2+0
10.	VPA 710	Bionomics of Parasites	3+0
11.	VPA 711	Environmental Parasitology	1+1
12.	VPA 790	Special Problem	0+2
13.	VPA 791	Doctoral Seminar I	1+0
14.	VPA 792	Doctoral Seminar II	1+0
15.	VPA 799	Doctoral Research	45

## 8. Veterinary Public Health & Epidemiology

### Faculty profile-

Sr. No	Name	Designation	Email	Phone	Joining Year	Qualification	Experience	Publications
1	Dr.Samiulakhan H. Sindhi	Associate Professor & Head	drsamivet@yahoo.co.in	9825761113	2010	Ph.D.	11 year	11
2	Dr. J. B. Kathiriya	Assistant Professor	jbkathiriya@gmail.com	9924619719	2006	Ph.D.	15 year	42
3	Dr. Kirit R. Bhedi	Assistant Professor	kiritbhedi.vety@gmail.com	8460390300	2016	M.V.Sc.	4 year	5

### About Department-

. The Department of Veterinary Public Health & Epidemiology was established with the inception of College of Veterinary Science and Animal husbandry in the year 2008. The department is functioning under the administration of College of Veterinary Science and Animal Husbandry, Kamdhenu University, Junagadh. Veterinary public health is a component of public health activities devoted to the application of professional veterinary skills, knowledge, and resources for the protection and improvement of public health. This department provides information and education on zoonotic diseases and steps taken to control and prevent zoonotic diseases to the undergraduate, postgraduate students. The department is having latest equipment like PCR, Bio safety cabinet, horizontal gel electrophoresis and well established UG and PG laboratories. This department has already completed 3 research projects.

#### Research area:

1. Zoonoses
2. Epidemiology
3. Milk and meat hygiene
4. Food hygiene and safety
5. Environmental pollution and safety
6. Fish, Fish Products & Sea food Hygiene

## Research Project

Completed Project					
Sr. No	Name	Duration	Funding agency	Budget	PI & Co PI
1	Ecological studies of Staphylococcus aureus isolates from poultry meat and associated environment in and around Junagadh district	2018-2019	Junagadh Agricultural University, Junagadh	12405	<b>PI:-</b> Dr.Kirit R Bhedi <b>Co PI:</b> Dr. J. B. Kathiriya & Dr. S. H Sindhi
2	Seroprevalence of Infectious Bovine Rhinotracheitis (IBR) in Dairy Animals with Reproductive Disorders	2016-2018	Junagadh Agricultural University, Junagadh	12405	<b>PI:-</b> Dr. J. B. Kathiriya&Dr. S. H Sindhi <b>Co PI:</b> Dr. B. S. Mathapati, & Dr. B. B. Javia,
3	Quality assessment of raw milk samples at the production point	2014-2015	Junagadh Agricultural University, Junagadh	12405	<b>PI :-</b> Dr. S. H Sindhi

On going					
Sr. No	Name	Duration	Funding agency	Budget	PI & Co PI
NIL					

## Achievement

- Health Care Excellence award "SPECIALIST FOR ANIMAL SCIENCE IN GUJARAT OF THE YEAR (2012) - Dr J B Kathiriya
- "Uttam Lekh Award" (Second) for Vernacular articles published in Krishi Gauvidhya (2013-14) - Dr J B Kathiriya
- "Uttam Lekh Award" (Second) for Vernacular articles published in Krishi Gauvidhya (2014-15) - Dr J B Kathiriya

## Publication

Sindhi, S. H., Mathapati, B. S., Parmar, V. L., Marandi, S., Sumankumar, M., Javia, B. B., Ghodasara, S. N., Kathiriya, J. B., Bhedi, K. R. and Patel, J. S. 2020. Prevalence of Campylobacter spp. Isolated from Poultry, Human and Environment in Junagadh District

of Gujarat, India. *International Journal of Current Microbiology and Applied Sciences*, 9(9): 3319-3326

Sindhi, S. H., Bhedi, K. R., Kathiriya, J. B. and Ghodasara, S. N. 2020. Crimean Congo Haemorrhagic Fever: An Emerging Tick-borne Metazoonosis. *International Journal of Current Microbiology and Applied Sciences*, 9(6): 2368-2375

Kathiriya, J. B., Shah, N.M., Patel, J.S., Javia, B.B., Tajpara, M.M., Ghodasara, S.N. and Barad, D.B..2020 Epidemiological surveillance of Dengue fever: An overview. *International Journal of Veterinary Sciences and Animal Husbandry*, 5(6): 01-10

Kathiriya, J. B., Shah, N. M., Sindhi, S.H., Trangadia, B.J., Tajapara, M.M., Vagh, A.A and Bhedi, K.R. 2020. Transmissible spongiform encephalopathies: Emerging threats. *International Journal of Veterinary Sciences and Animal Husbandry*, 5(6): 64-71

Kathiriya, J. B., Shah, N. M., Trangadia, B.J., Sindhi, S.H., Javia, B. B. and Ghodasara, S. N.2020. Lateral Flow Assay as a Field Test for Sero-Diagnosis of Brucellosis in Small Ruminants. *The Indian Journal of Veterinary Science & Biotechnology*, 16(2,3 &4): 40-44.

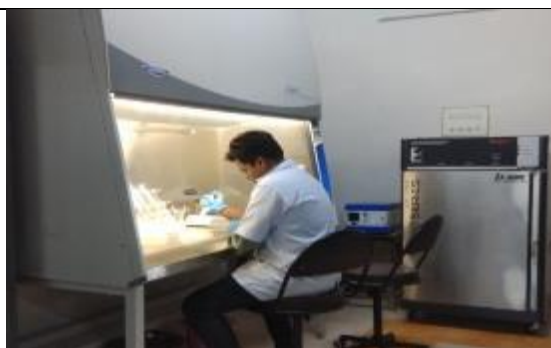
**Media Gallery**  
**Photo Gallery**

U. G. Laboratory



Zoonose cum Epidemiology

Milk and Meat Hygiene lab



Biosafety Cabinet



Horizontal Laminar Air flow

**Contact us**

**Address**

**Head of Department:**

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M.V.Sc., Ph.D., VPH

Associate Professor and Head

Mobile No. 9825761113

E. mail- [drsamivet@yahoo.co.in](mailto:drsamivet@yahoo.co.in)

**Courses offered by the Department (optional/additional information)**

**U G Programme Theory and Practical (VCI, MSVE, 2016)**

Sr. no.	Course Title	Credit
1	Veterinary Public Health & Epidemiology	3+1
	Theory	
	Unit 1 : Veterinary Public Health & Food Safety	
	Unit 2: Veterinary Epidemiology	

	Unit 3: Veterinary Zoonoses	
	Unit 4: Environmental Hygiene	
	Practical	
	Unit 1 : Veterinary Public Health & Food Safety	
	Unit 2: Veterinary Epidemiology	
	Unit 3: Veterinary Zoonoses	
	Unit 4: Environmental Hygiene	

### PG Programme

Sr. no.	Course no.	Course Title	Credits
1	VPH601	Elements of Veterinary Public Health	1+1
2	VPH 602	Bacterial and Rickettsial Agents of Public Health Significance	2+1
3	VPH 603	Viral, Fungal and Parasitic Agents of Public Health Significance	2+1
4	VPH604	Zoonoses and Public Health	2+1
5	VPH 605	Principles of Food Hygiene and Safety	2+1
6	VPH 606	Food-Borne Infections and Intoxications	2+1
7	VPH607	Meat and Milk Hygiene	2+1
8	VPH 608	Environmental Pollution and Safety	3+1
9	VPH609	Fish, Fish Products and Seafood Hygiene	1+1
10	VPH 610	Bioterrorism and Disaster Management	1+1
11	VPH691	Master's Seminar	1+0
12	VPH 699	Master's Research	20

### Ph.D Programme

Sr. no.	Course no.	Course Title	Credits
1	VPH 701	Current Topics in Veterinary Public Health	2+1
2	VPH 702	Emerging and Re-emerging Zoonoses	2+1



3	VPH 703	Quality Control of Animal Food Products	2+1
4	VPH 704	Occupational Health Hazards	2+1
5	VPH 705	Disposal and Recycling of Waste	2+1
6	VPH 706	Biohazards, Biosecurity and Disaster Management	2+0
7	VPH 707	Food Plant Sanitation	2+1
8	VPH 708	Advances in Environmental Pollution Control	2+1
9	VPH 791	Doctoral Seminar I	1+0
10	VPH 792	Doctoral Seminar II	1+0
11	VPH 790	Special Problem	0+2
12	VPH 799	Doctoral Research	45

## Department of Veterinary Medicine

### Faculty profile

Sr. No.	Name	Designation	e- mail	Phone	Joining year	Qualification	Experience (Year)	Publication (Research paper number)
1	Dr. A. A. Vagh	Associate Professor & Head	dr_vagh@yahoo.co.in	9427739500	2010	Ph.D	10	15
2	Dr. B. R. Patel	Assistant Professor	drbhavika30@gmail.com	9712941792	2012	M.V.Sc.	08	13
3	Dr. A. K. Bilwal	Assistant Professor	drbhavika30@gmail.com	9913546926	2016	M.V.Sc.	04	16
4	Sh. R. J. Helaiya	Lab. Technician	helaiyarajesh10@gmail.com	9426129033	2010	B.Sc.(Micro), DMLT	10	--

### About the Department

The Department of Veterinary Medicine was established with the inception of College of Veterinary Science and Animal husbandry in the year 2008. The department is functioning under the administration of College of Veterinary Science and Animal Husbandry, J.A.U., Junagadh.

### Objective:

1. To impart education in the subject of Veterinary Medicine to the UG, PG and Polytechnic students.
2. To undertake research activities in field of Veterinary Medicine.
3. To undertake the extension of the subject to the farmers in co-operation with the Government departments and agencies concerned.
4. To provide service at TVCC and Ambulatory Clinic for attending cases of medicine in all species of animals both domestic and wild.

### Research Area and Projects Brief

Sr. No.	Title	Funding Agency	Grant	Principal Investigator/CoPI	Completed
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1	Technical assistance for wild life health care, Disease Diagnosis and Therapeutic Management	Sakkarbaug Zoo Management Advisory Society (B.H 18303-14)	5,68,691/-	Dr. J. S. Patel (PI) Dr. V.D. Dodia Dr. D. T. Fefar Dr. Binod kumar Dr. B. S. Mathapati	Completed
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### Activities/Trainings/Seminars/Workshops

#### 1. Training programme organized und Assistance to States for Control of Animal Diseases scheme (ASCAD)

ASCAD sponsored training programme for Veterinary Officers was conducted. Veterinary Officers were deputed by the Dept. of Animal Husbandry, Gandhinagar to attend the training programmes.

Sr. No.	Title of Training	Type of participants	No. of participants
1.	Recent Advances in Large animal Internal Medicine	Veterinary Officers	07

#### 2. Entrepreneurship training programme

Training programme was organized entitled as “Pet spa and Pet behavioural issues” Under Institutional Development Plan, ICAR on 3rd December, 2018



### Achievements

- Best Teacher Award (2017) – Dr J. S. Patel

### List of publication

- Patel, B.R.; Kumar, B. and Vagh, A.A. 2019. Clinicotherapeutic management of Theileriosis in gir cows. *Ruminant Science*. 8(2): 271-272.
- Bilwal, A.K.; Parmar, V.L.; Brahmabhatt, N.N.; Vagh, A.A. and Vasava, A.A. 2020. Clinical presentation and therapeutic management of ivermectin toxicity in German Spitz dog. *Journal of Entomology and Zoology Studies*. 8(1): 1155-1157.

### Academic

#### UG programme

**New Syllabus as per VCI (MSVE-2016)**

<b>Sr. no.</b>	<b>Course no.</b>	<b>Course Title</b>	<b>Credits</b>	<b>Semester</b>
1	VMD	Veterinary Medicine	4+1=5	Fourth
<b>Old Syllabus as per VCI</b>				
<b>Sr. no.</b>	<b>Course no.</b>	<b>Course Title</b>	<b>Credits</b>	<b>Semester</b>
1	VMD-411	Veterinary Clinical Medicine-I	(2+1=3)	VII
2	VMD-412	Veterinary Preventive Medicine-I	(2+0=2)	VII
3	VMD-421	Veterinary Clinical Medicine-II	(2+0=2)	VIII
4	VMD-422	Veterinary Preventive Medicine-II	(2+0=2)	VIII
5	VMD-511	Animal Welfare, Ethics & Jurisprudence	(2+0=2)	IX
6	VMD-512	Zoo/Wild animal, Breeding, Nutrition, Management, and Health care	(1+1=2)	IX
7	VMD-513	Pet animal Breeding, Management, Nutrition and Health care	(1+1=2)	IX

### **PG Programme**

<b>Sr. no.</b>	<b>Course no.</b>	<b>Course Title</b>	<b>Credits</b>
1	VCM-601	Ruminant Clinical Medicine -I	2+0
2	VCM-602	Ruminant Clinical Medicine -II	2+0
3	VCM-603	Equine Clinical Medicine	2+0
4	VCM-604	Canine And Feline Clinical Medicine	2+0
5	VCM-605	Swine Clinical Medicine	1+0
6	VCM-606	Avian Medicine	1+0
7	VCM-607	Zoo, Wild & Laboratory Animal Medicine	2+0
8	VCM-608	Clinical Diseases Of Animal Species Of Regional Importance	1+0
9	VCM-609	Production Diseases	2+0
10	VCM-610	Diseases Of Animals Caused By Toxicants	1+0

11	VCM-611	Veterinary Forensic Medicine	1+1
12	VCM-612	Clinical Diagnostic Techniques	0+2
13	VCM-613	Veterinary Emergency Medicine	0+2
14	VCM-614	Clinical Practice I	0+3
15	VCM-615	Clinical Practice II	0+3
16	VCM-691	Master's Seminar	1+0
17	VCM-699	Master's Research	20
18	VCM-701	Advances In Gastroentrolgy	2+0
19	VCM-702	Advances In Cardiopulmonary Medicine	2+0
20	VCM-703	Advances In Neurological And Urological Disorders	2+0
21	VCM-704	Advances In Endocrine And Dermatological Disorders	2+0
22	VCM-705	Advances In Production Diseases	2+0
23	VCM-706	Advances In Paediatrics And Geriatrics	1+0
24	VCM-707	Advances In Veterinary Diagnostics	1+2
25	VCM-708	Advances In Veterinary Therapeutics	1+2
26	VCM-709	Advanced Clinical Practice I	0+2
27	VCM-710	Advanced Clinical Practice II	0+2
28	VCM-711	Advanced Clinical Practice III	0+2
29	VCM-790	Special Problem	0+2
30	VCM-791	Doctoral Seminar I	1+0
31	VCM-792	Doctoral Seminar II	1+0
32	VCM-799	Doctoral Research	45

**No. of polytechnic course being offered**

Sr. no.	Course no.	Course Title	Credit	Semester
1	AHC-221	Introductory Animal Health Care-I	(2+2=4)	IV
2	AHC-312	Introductory Animal Health Care-II	(2+2=4)	V

**Media gallery**

**Photographs of Laboratories**



**Clinical Medicine Lab**



**Blood Gas Analyser**



**Advanced research Microscope**



**Digital pH Meter**



**Automated Hematology Analyzer**



**Serum Biochemical Analyzer**

**Clinical services at Hospital & during Clinical camps**



Contact Us

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Associate Professor & Head

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Junagadh Agricultural University, Junagadh -362001

Phone No.: 9427739500

Email: dr\_vagh@yahoo.co.in

## 9. Veterinary Gynaecology & Obstetrics

### Faculty Profile

Sr . No.	Name	Designation	Email:	Mobile	Joining year	Qualification	Experience (Year)	Research papers
1	Dr. K. B. Vala	Associate Professor and Head	<a href="mailto:drkkvala@gmail.com">drkkvala@gmail.com</a>	9328933728	2012 (JAU)	Ph.D.	10 + 1 (Other)	25
2	Dr. K. H. Parmar	Assistant Professor	<a href="mailto:parmarkiran16@yahoo.co.in">parmarkiran16@yahoo.co.in</a>	9016617817	2012 (JAU)	Ph.D.	09	22

### About the Department

Department of Veterinary Gynaecology and Obstetrics is one of the key clinical departments of College of Veterinary Science and Animal Husbandry for imparting quality teaching to UG and PG students of veterinary science along with clinical services, research and extension activities.

Department is having various laboratories as per the requirement of Veterinary Council of India for UG and PG teaching viz; Gynaecology lab, Andrology lab, Museum, PG lab with various advance instrumentation which will directly benefit to the livestock owner.

Department is providing advance diagnostic facilities of various infertility and obstetrical problems and treatment to the domestic, pet animals, wild animals and NGOs of Saurashtra and Gujarat region since its inception. Last year faculties of this department had treated more than 1000 cases in Gynaecology OPD, ambulatory clinics and clinical camp.

### Research Area

15. Prevention and control of infertility in dairy animals.
16. Improve semen quality
17. Embryo Transfer Technology
18. Improve fertility in equine

### Project Detail

On going					
Sr. No.	Title of scheme	Duration	Funding Agency	Budget	Principal Investigator
1	Efficacy of ultrasonography, uterine swab, culture and endometrial cytology for diagnosis of equine endometritis	Two Years	State Government	12405	PI-Dr. K. B. Vala Co PI- Dr. D. N. Borkhatariya Dr. K. H. Parmar Dr. R. J. Raval Dr. D. T. Fefar Dr. D. B. Barad

### Achievements and List of Research Publications

#### Awards/ Medals Received by the Faculty/ Students

7. Best oral Presentation: Dr. K. B. Vala *et. al.*- in National seminar organised by SVSBT from from 16 to 17 December, 2016.
8. Best poster presentation: Dr. K. H. Parmar *et. al.*- in National seminar organised by SVSBT from from 16 to 17 December, 2016.
9. Best research paper presentation award: Dr. K. B. Vala *et. al.* in International seminar organised by ISSAR from 28 to 30 December, 2018
10. Best Popular article: Dr. K.H.Parmar was selected as best article in *epashupaln journal* during July, 2020



### Other achievements

- Total 03 research recommendations were given for scientific community.
- Diagnosis and Treatment of Animal having Reproductive disorders.
- Prevention and control of infertility in dairy animals.
- Power Point Presentations have been prepared for all units of UG and P.G. courses
- Training of Veterinary Officers and Livestock inspectors (ASCAD).
- Providing Technical expertise at Clinical camps
- Practical manuals of all courses have been prepared.

### List of Recent Research Publications(2019-20)

23. Vala, K.B., Dhama, A.J., Kavani, F.S., Bhnaderi, B.B. and Parmar, S.C. (2020). Impact of peripartum nutritional supplementation on thyroid hormones, metabolites and reproductive peridata in Jaffarabadi buffaloes. *Indian Journal of Veterinary Science and biotechnology*. 15 (3): 16-20. (NASS Rating -4.47)
24. K. H. Parmar, A. J. Dhama, F. S. Kavani, G. B.Solanki, K. S. Murthy. (2019). Seasonal Influence on sexual behaviour of Jaffarabadi buffalo bulls. *Ind. J. Vet Sci. and biotech*. Vol 15 (1): 36-39. (NASS Rating -4.47)
25. K. H. Parmar, F. S.Kavani, T. K. Patbandha, S. S. Parikh. (2020).Fresh and Post-Thaw Seminal Attributes of Jaffarabadi Buffalo Bulls. *Ind. J. Vet Sci. and biotech*. Vol 15 (3): 45-48. (NASS Rating -4.47)
26. K.H.Parmar, P.H.Tank and F.S.Kavani (2020). Seasonal influence on post thaw seminal attributes and conception rate from semen of Jaffarabadi buffalo bulls. *Indian Journal of Animal Research*. (Online). (NASS Rating -6.20)

### Activities/Trainings/Seminars/Workshops organized by Department

3. The five Days Online Vocational Training programme on “**Immunological Advancements in Male and Female Fertility**”organized by Department of Veterinary Gynaecology & Obstetrics in collaboration with Department of Veterinary Physiology & Biochemistry, College of Veterinary Science and Animal Husbandry, Junagadh Agricultural University, Junagadh under the ages of Institutional Development Plan - ICAR from 1<sup>st</sup> to 5<sup>th</sup> September, 2020.

### Information of Courses offered Under-graduate Programme (As per VCI MSVE, 2016)

Sr. No.	Course Title	Credit
1	<b>Veterinary Gynaecology and Obstetrics</b>	2+1
	Theory	
	Unit 1: Veterinary Gynaecology	
	Unit 2: Veterinary Obstetrics	
	Unit 3: Veterinary Andrology and A. I.	
	Practical	
	Unit 1: Veterinary Gynaecology	
Unit 2: Veterinary Obstetrics		

	Unit 3: Veterinary Andrology, A. I. and Assisted Reproductive Techniques	
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### Post-graduate Programme

Sr. No.	Code	Course Title	Credits
15.	VOG 601	General Gynaecology	3+1=4
16.	VOG 602	Female Infertility	3+1=4
17.	VOG 603	Veterinary Obstetrics	2+2=4
18.	VOG 604	Andrology & Male Infertility	3+1=4
19.	VOG 605	Semen Preservation and Artificial Insemination	2+1=3
20.	VOG 606	Reproductive Biotechnology	2+1=3
21.	VOG 607	Clinical Practice I	0+3=3
22.	VOG 608	Clinical Practice II	0+3=3
23.	VOG 691	Master's Seminar	1+0=1
24.	VOG 699	Master's Research	20

### Ph.D. Programme

Sr. No.	Code	Course Title	Credits
18.	VOG 701	Advances in Gynaecology	2+1=3
19.	VOG 702	Advances in Obstetrics	2+1=3
20.	VOG 703	Advances in Andrology	2+1=3
21.	VOG 704	Advances in Reproductive Biotechnology	1+1=2
22.	VOG 705	Advances in Semen Preservation	1+1=2
23.	VOG 706	Clinical Practice I	0+3=3
24.	VOG 707	Clinical Practice II	0+3=3
25.	VOG 790	Special problem	0+ 2=2
26.	VOG 791	Doctoral seminar I	1+0=1
27.	VOG 792	Doctoral seminar II	1+ 0=1
28.	VOG 799	Doctoral research	45

### Infrastructure Facility and Major Equipment available

Sr. No.	Name of instrument
26.	Phantom box for large and small animal
27.	Trinocular Microscope with digital micro photography
28.	Research Microscope with digital micro photography
29.	Portable ultrasonography machine
30.	Co <sub>2</sub> incubator
31.	Phase contrast microscope
32.	Steriozoom microscope

33.	IVET Scope
34.	Manual freezing unit
35.	Embryo freezing unit
36.	Calf Puller
37.	Oestrous detector

**Photo gallery**

**Album1:** Department of Veterinary Gynaecology and Obstetrics



**Museum cum Phantom hall palpation room**



**Gynaecology Laboratory and Obstetrics room**



**Andrology Laboratory**



**Research Laboratory for PG students**

**Album 2:**

Different activities carried out by Department of Veterinary Gynaecology and Obstetrics



**Artificial insemination**



**Caesarean in buffalo in OPD**

**Foetotomy in buffalo in OPD**



**Gynaeco-clinical examination OPD**

**Ultrasonography**



Oocytes retrieval process



Pregnancy diagnosis in camel

**Album 3:**

Instruments and diagnostic Facilities available at Department of Veterinary Gynaecology and Obstetrics

<p>Portable Ultrasonography machine</p>	<p>Stereo zoom microscope Oocytes retrieval</p>
<p>Phase contrast microscope</p>	<p>Electro-ejaculator</p>
<p>IVET SCOPE</p>	<p>Embryo freezing machine</p>



Squeeze crate



Co2 incubator



Phantom box



Rear parts Elevator

**Contacts Us:**

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## VETERINARY SURGERY AND RADIOLOGY

### Faculty Profile

Sr . No.	Name	Designation	Email:	Mobile	Joining year	Qualification	Experience (Year)	Research papers
1	Dr. S. H. Talekar	Associate Professor	<a href="mailto:shivaji.talekar@gmail.com">shivaji.talekar@gmail.com</a>	9833149004	2013	Ph.D.	13	25
2	Dr. K. S. Gameti	Assistant Professor	<a href="mailto:kanaksinhhgameti25@gmail.com">kanaksinhhgameti25@gmail.com</a>	9427508571	2016	M. V. Sc.	5	5

### About department:

Department of Veterinary Surgery and Radiology was started in the year 2008 along with the establishment of College of Veterinary Science & Animal Husbandry, in Junagadh Agricultural University at Junagadh. At present, Department of Veterinary Surgery and Radiology is independently functioning in teaching of undergraduate, postgraduate studies in Veterinary Science and Polytechnic Diploma in Animal Husbandry. This department equipped with necessary infrastructure as per VCI norms, audio-visual practical labs etc. used for facilitating leadership development among students. The department co-ordinates with other departments of college regarding clinical services for farmers and pet owners. Farmers and para-vets as well as participation of the faculty members in various extension activities through Krushi Melas, Krushi Mahotsav. The Department of Veterinary Surgery & Radiology was established with the inception of College of Veterinary Science and Animal Husbandry in the year 2008. The department is functioning under the administration of College of Veterinary Science and Animal Husbandry, JAU, Junagadh. The Surgery Department remains vibrant and offers surgical care with specialized and super-specialized facilities under one roof which offers a comprehensive treatment in all surgical illnesses including diagnosis and treatment. The services provided at the Department like, Video Endoscopy both diagnostic & therapeutic, Dental Scaling, Cataract Surgery, Laser Surgery, Ultrasonography, Thermography, Digital Radiography, Continuous Fluoroscopy, Minimally invasive surgery, Emergency trauma care, General surgical emergencies, and Elective surgical / oncosurgical procedures.

### Major Achievements of Research & Teaching: --

No. of Master and PhD Students Passed Out from Department M. V. Sc. = 18 Ph. D. = 01

### Recommendations

#### Recommendation 1:

Higher incidence of tartar was observed in pre molar teeth, hence it is recommended to veterinarian for through examination of pre molar teeth during oral examination of pet.

#### Recommendation 2:

The normal VHS for mongrel dogs in range of 8.0 to 11.1v. The deviation from this range may be cardiac abnormalities in mongrel dogs.

**Recommendation 3:**

Horse rearers are informed that the prevalence of laminitis is higher during winter; hence they are advised to take appropriate care of the hooves.

**Awards/Medals Received by the Faculty/Students**

1. Jignesh V. Vadalia: Best poster presentation award – 2016-17
2. Gold Medal (Ruminant Surgery Session-2018) of Indian Society for Veterinary Surgery for the paper entitled "Bubaline diaphragm matrix: Development and clinical assessment into cattle abdominal hernia repair"
3. Young Scientist Award in 2019 from the Society for Veterinary Science & Biotechnology.

Number of Publications: 86

Research Paper: 18

Books/Chapter in Books: 04

Bulletine:

Research paper Above NAAS rating 6: 10

Research paper below NAAS rating 6: 30

Popular Article: 62

**ON GOING TECHNICAL PROGRAMME**

- 1 Standardization and application of infrared thermography in musculo-skeletal disorders of horses and dogs.
- 2 Standardization and application of CO2 Laser as alternative technique for surgery of tumours in dogs

ON GOING					
Sr. No.	Name	Period	Funding Agency	Budget	PI and Co.PI
1	Standardization and application of infrared thermography in musculo-skeletal disorders of horses and dogs	2021-2022	--	--	<b>PI:</b> Dr. S. H. Talekar <b>Co PI :</b> Dr. K. S. Gameti
2	Standardization and application of CO2 Laser as alternative technique for surgery of tumours in dogs	2021-2022	--	--	<b>PI:</b> Dr. S. H. Talekar <b>Co PI :</b> Dr. K. S. Gameti

**List of Publication of Current Year:**

1. Talekar SH1\*, Gameti KS2 Surgical management of mandible fracture with interdental wires in a Marwari stallion Intas Polivet (2019) Vol. 20 (II): 401-403.
2. SB Swami1\*, JS Patel1, SH Talekar2, Binod Kumar3, VL Parmar1, AK Bilwal1, BR



- Patel1 Prevalence of Haemoprotozoan Infection in Gir Cattle in and around Junagadh, Gujarat The Indian Journal of Veterinary Sciences and Biotechnology (2019): 10.21887/ijvsbt.15.2.12
3. G.B. Solanki1\*, F.S. Kavani2, S.H. Talekar3, A.R. Ahlawat3, H.H. Savsani3 and P.M. Gamit1 Seasonal Influence on Sexual Behaviour Score of Gir Bulls International Journal of Current Microbiology and Applied Sciences ISSN: 2319-7706 Volume 8 Number 06 (2019).
  4. RJ Ravali1\*, KB Vala2, KH Parmar3, SH Talekar4 Surgical Management of Secondary Uterine Inertia in Two Bitches IndJ of Vet Sci and Biotech (2019): 10.21887/ijvsbt.15.1.22.
  5. P.S. Chikhaliya1, A.R. Ahlawat1\*, S.H. Talekar1, G.S.P. Solanki2, J.K. Chaudhary2 and A.D. Verma Effect of Different Concentrations of Taurine on Certain Physico – Morphological Attributes during Cryopreservation of Gir Bull Semen International Journal of Current Microbiology and Applied Sciences ISSN: 2319-7706 Volume 8 Number 05 (2019).
  6. JV Vadalia1\*, PH Tank, VD Dodia, SH Talekar, NR Padaliya, RH Bhatt. Clinical Survey on Preputial Prolapse in Gir Bulls IndJ of Vet Sci and Biotech (2020):66-68 Volume 13 (3)
  7. Khatariya M. D.1, Talekar S. H.\*1, Ahlawat AR2, Dodia V.D.1 and Kalaria V.A.3 Clinical Studies of Periodontal Diseases on Haemato-Biochemical, Microbiological and Chemical Analysis of Dental Tartar World Journal of Pharmaceutical and Life Sciences 2020, Vol. 6, Issue 5, 95-101.
  8. MD Khatariya1, SH Talekar1\*, AR Ahlawat2, VD Dodia1, VA Kalaria3 Periodontal diseases and their surgical management in dogs Ind J of Vet Sci and Biotech (2020): Volume 15 Issue 4 19-23.(April-June 2020) 10.21887/ijvsbt.15.4.4.
  9. Anil Sharma1\*, Y.L. Vyas 2, Vishnudeo Kumar3, P.H. Tank4 and S.H. Talekar5 Gross Morphometric Studies on Thyroid and Adrenal Glands of Jaffarabadi Buffalo during Different Seasons of the Year Indian Journal of Veterinary Anatomy 32 (1): 19-22, June 2020.
  10. Prasad A, Kumar V, Kumar B (2019). First report of acute bilateral hyphema in a Theileria equi-infected Kathiawari horse. Journal of Equine Veterinary Science 77(6): 72-74. <http://dx.doi.org/10.1016/j.jevs.2019.02.021>. [NAAS-6.93]
  11. Vora SD, Kumar V, Asodiya FA, Singh VK, Fefar DT, Gajera HP (2019). Bubaline diaphragm matrix: development and clinical assessment into cattle abdominal hernia repair. Brazilian Archives of Biology and Technology 62:e19180442. <http://dx.doi.org/10.1590/1678-4324-2019180442>[NAAS-6.76]

12. Kumar V, Vora S, Asodiya F (2019). Laryngotracheoesophageal compression due to giant benign hyperplastic thyroid in a Jaffarabadi buffalo. Buffalo Bulletin 38(4): 673-680.  
[NAAS-6.10]
13. Asodiya FA, Kumar V, Vora SD, Singh VK, Fefar DT, Gajera HP (2020). Preparation, characterization, and xenotransplantation of the caprine acellular dermal matrix. Xenotransplantation 27(4):e12572.<http://dx.doi.org/10.1111/xen.12572> [NAAS-10.72]
14. Kumar V (2020). Abdominal intercostal hernia in a cat (*Felis domestica*). Topics in Companion Animal Medicine 40: 100437.  
<http://dx.doi.org/10.1016/j.tcam.2020.100437> [NAAS-6.46]
15. Vora SD, Kumar V, Singh VK, Fefar DT, Gajera HP (2020). Bubaline aortic matrix: Histologic, imaging, Fourier transform infrared spectroscopic characterization and application into cattle abdominal hernia repair. Proceedings of the National Academy of Sciences, India Section B: Biological Sciences 90 (1): 161-170. <https://doi.org/10.1007/s40011-019-01094-w>.
16. Kumar V, Vora SD (2019). Abdominal wall repair with bubaline aortic matrix in a goat. Indian Journal of Small Ruminants 25(2): 255-256 doi: 10.5958/0973-9718.2019.00035.7.[NAAS-5.25]

#### **EXTENSION ACTIVITIES**

**1** Department of Surgery and Radiology, College of Veterinary Science & A.H., Junagadh Agricultural University, Junagadh successfully organized a Five Day Online Vocational Training on “**Advance Diagnostic Techniques in Livestock and Pets**” on January **04-08,**

**2021.** The training is being organized under aegis of Institutional Development Plan, Indian Council of Agricultural Research, New Delhi.

**2** All faculties are involved to provide information / advice regarding animal husbandry, care

during illness or after surgical correction, recommendation etc. to animals owners, pet owners and breeders for improvement of their health status.

**3** During camp or ambulatory clinic, extension activities is carried out at the door step of farmers for betterment of animal's lifestyle.

#### **MEDIA GALLERY**

#### **PHOTO GALLERY**





● **પાંચલક્ષીમાં 178 ફરિયાદો: 7 દર્શન તાલુકા**  
 મહારાષ્ટ્રમાં પાંચલક્ષીમાં 178 ફરિયાદો દર્શન તાલુકામાં દાખલ થઈ ચૂકી છે. આમાં 7 દર્શન તાલુકામાં 178 ફરિયાદો દાખલ થઈ ચૂકી છે. આમાં 7 દર્શન તાલુકામાં 178 ફરિયાદો દાખલ થઈ ચૂકી છે.

● **પતંગની દોરીથી 325 પક્ષીઓ ઘવાયા**

મહારાષ્ટ્રમાં પતંગના દોરીથી 325 પક્ષીઓ ઘવાયા છે. આમાં 325 પક્ષીઓ ઘવાયા છે. આમાં 325 પક્ષીઓ ઘવાયા છે.



● **ઈમરજન્સી 108માં 152 કોલ નોંધાયા**

મહારાષ્ટ્રમાં ઈમરજન્સી 108માં 152 કોલ નોંધાયા છે. આમાં 152 કોલ નોંધાયા છે. આમાં 152 કોલ નોંધાયા છે.

જૂનાગઢની વેટરીનરી કોલેજમાં

**રાજસ્થાનની કાઠિયાવાડી બોલી 'શોશ'ની ૮૮ દિલ્હીની શિક્ષણ કેન્દ્રની ગોઠવણ અંગે**

રાજસ્થાનના અજાયબ કામઠામાં જુનેના કાઠિયાવાડી નાસ્તીના નવ વર્ષની ગણતરી થઈ ચૂકી છે. આમાં 178 ફરિયાદો દાખલ થઈ ચૂકી છે.



**કૃષિ.યુનિ. દ્વારા ભાણવડમાં પશુરોગ નિદાન કેમ્પ યોજાયો**

આ કેમ્પમાં પશુરોગ નિદાન કરવામાં આવ્યું છે. આમાં 152 કોલ નોંધાયા છે.

**Caesarean operation in bitch at Veterinary College, Junagadh**

An adult stray bitch was brought to Veterinary College Hospital, found with labor condition. Dr Jignesh Vadaliya, Dr Vineet Kumar and Dr Atul Patel performed a successful caesarean operation. The bitch had given birth to eight puppies, out of which three were live. Because of in time valuable efforts of Veterinary

Surgeons of Veterinary College performing Caesarean operation

**પેટરનરી કોલેજમાં પ્રથમ વખત હાથથીને સારવાર અપાઇ**

આ કોલેજમાં પ્રથમ વખત હાથથીને સારવાર અપાઇ છે. આમાં 152 કોલ નોંધાયા છે.

**દિવ્ય ભાસ્કર** 19-Dec-2018 પૃષ્ઠા નંબર Page 17

**વાંસવાર આફરો અટકાવવા માટે જૂનાગઢ પેટરનરી કોલેજમાં લાવ્યા, એક્સ-રેમાં નિદાન થયું પાડાનાં દૃશ્યની સર્જરી કરી કાણુ બંધ કરાયું**

આ કોલેજમાં પાડાનાં દૃશ્યની સર્જરી કરી કાણુ બંધ કરાયું છે. આમાં 152 કોલ નોંધાયા છે.

# જૂનાગઢ જિલ્લાનાં ઇતિહાસમાં પ્રથમવાર 'કૂતરી'નું સીઝેરીયન

- સોનકાલ વિલકાવળના નિવૃત્ત ડોક્ટરોએ ઈલાજને સફળ કર્યું
- દુપરણાંને વચ્ચે કરાવ્યો

## ખરાબદર પુસ્તક

સોનકાલ વિલકાવળના નિવૃત્ત ડોક્ટરોએ ઈલાજને સફળ કર્યું. દુપરણાંને વચ્ચે કરાવ્યો. સોનકાલ વિલકાવળના નિવૃત્ત ડોક્ટરોએ ઈલાજને સફળ કર્યું. દુપરણાંને વચ્ચે કરાવ્યો.



ડૉ. અમુકેશભાઈ કે. જુલેલાએ સોનકાલ વિલકાવળમાં ઈલાજ કર્યો. ઈલાજને સફળ કર્યું. દુપરણાંને વચ્ચે કરાવ્યો.

દિવ્ય ભાસ્કર - ૧૬મી સપ્ટેમ્બર ૨૦૧૭  
સામાજિક, વૃક્ષ





### Contact Information

#### Address:

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### COURSES OFFERED BY THE DEPARTMENT

Sr. no.	Course no.	Course Title	Credit	Semester
<b>A) U.G. Courses</b> યુજી પ્રોગ્રામ થી ચરી અને પ્રેક્ટિકલ (વી.સી.આઈ. એમએસવીઈ, ૨૦૧૬ મુજબ)				
1	VSR-411	General Veterinary Surgery, Anaesthesiology and Diagnostic Imaging	2+2=4	VII
2	VSR -421	Regional Veterinary Surgery	2+1=3	VIII

3	VSR -511	Veterinary Orthopaedics and Lameness	1+1=2	IX
4	VSR	Veterinary Surgery & Radiology Theory and Practical Unit - 1 General Veterinary Surgery Unit - 2 Veterinary Anaesthesiology Unit - 3 Veterinary Diagnostic Imaging Techniques Unit - 4 Regional Surgery – 1 Unit - 5 Regional Surgery – 2 Unit - 6 Orthopedic and Lameness	2+1=3	NewVCI
<b>B) P.G. Courses પીજીપ્રોગ્રામ</b>				
1	VSR-601	Principles of surgery	2+0=2	
2	VSR-602	Clinical practice – i	0+3=3	
3	VSR-603	Clinical practice – ii	0+3=3	
4	VSR-604	Small animal anaesthesia	2+1=3	
5	VSR-605	Large animal anaesthesia	2+1=3	
6	VSR-606	Diagnostic imaging techniques	2+1=3	
7	VSR-607	Veterinary ophthalmology and dentistry	1+1=2	
8	VSR-608	Small animal soft tissue surgery	2+1=3	
9	VSR-609	Large animal soft tissue surgery	2+1=3	
10	VSR-610	Orthopaedic and limb surgery	2+1=3	
11	VSR-691	Master's seminar	1+0=1	
12	VSR-699	Master's research	(20)	
<b>C) Ph.D. Courses પીએચડીપ્રોગ્રામ</b>				
1	VSR-701	Clinical surgical practice – i	0+2=2	
2	VSR-702	Clinical surgical practice – ii	0+2=2	
3	VSR-703	Clinical surgical practice – iii	0+2=2	
4	VSR-704	Anaesthesia of wild and laboratory animals	1+1=1	
5	VSR-705	Advances in anaesthesiology	2+1=3	
6	VSR-706	Advances in diagnostic imaging techniques	2+1=3	
7	VSR-707	Neurosurgery	2+1=3	
8	VSR-708	Experimental surgical techniques in animals	1+1=2	
9	VSR-789	Special problems in anaesthesia	0+2=2	
10	VSR-790	Special problems in surgery	0+2=2	
11	VSR-791	Doctoral seminar i	1+0=1	
12	VSR-792	Doctoral seminar ii	1+0=1	



13	VSR-799	Doctoral research	45	
<b>D) Polytechnic Courses</b>				
1	VSUR-311	Minor Veterinary Surgery	2+1=3	

## VETERINARY CLINICAL COMPLEX

### Faculty Profile:

S r. No	Name	Designation	E-mail	Mobile No.	Joining Year	Qualification	Experience	Publication (Research paper in No.)
1	Dr. R. H. Bhatt	Associate Professor & Head	drrhbhatt@yahoo.com, drrhbhatt@gmail.com	9879687630	2018	Ph. D.	11 years	30
2	Dr. J. V. Vadalia	Assistant Professor	dr.jvvpatel@gmail.com	8980957065	2012	Ph. D.	9 years	12
3	Dr. R. J. Raval	Assistant Professor	rupeshraval@rediffmail.com	9427488263	2012	Ph. D.	14 years	33
4	Dr. Joice P. Joseph	Assistant Professor	joicepjoseph1@gmail.com	9824928145	2012	Ph. D.	9 years	24
5	Dr. N. R. Padaliya	Assistant Professor	drnrpadaliya@yahoo.in	9428698690	2016	M.V.Sc	5 years	2
6	Dr. V. D. Dodia	Assistant Professor	dr.vaibhavsinh@gmail.com	7777944933	2015	M.V.Sc	6 years	10
7	Dr. V. L. Parmar	Assistant Professor	dr.vijayvets@yahoo.com	9558031313	2015	M.V.Sc	6 years	21
8	Dr. N. N. Brahmhatt	Assistant Professor	brahmhattnili92@gmail.com	9909695679	2016	M.V.Sc	4 years	6

### About the Department:

Veterinary Clinical Complex (VCC) is working for clinical teaching, diagnosis and treatment of animals through its different units. The VCC is a premier center for treatment of animals and serve as a referral Veterinary Clinic for Saurashtra region with main aim to train students to achieve academic excellence and become successful veterinarians.

The Under Graduate programme at College of Veterinary Science and Animal Husbandry, JAU, Junagadh includes basic and applied training in handling of clinical cases and to undertake diagnostic procedures, evaluation and interpretation of laboratory results, correlating them with clinical findings for proper diagnosis, treatment and prediction of prognosis.

Veterinary Clinical Complex gets large number of clinical cases of small and large animals which provides ample teaching material for undergraduate students. The location of different units of Veterinary Clinics and various clinical departments at one place has provided a well-integrated and coordinated approach to the diagnosis and treatment of diseases in small and large animals. About 10,000 clinical cases of various animal species per year pertained to medicinal, gynecological, surgical are getting treatment. Along with these 4,000 samples are analyzed for clinical diagnosis related to pathological, microbiological, parasitological and biochemical investigations. In addition, X-ray investigations and Ultrasound scans are also routinely performed.

Diagnostics facilities provides a highly efficient, personalized diagnostic service to clinicians, particularly in clinical pathology, biochemistry, bacteriology, parasitology etc. for diagnosis of various affections and control of animal diseases. In addition to efficient functioning of Veterinary Hospital, departments also provides hands on training to undergraduate and postgraduate students; coordinate internship programme, provides regular ambulatory service to rural areas; organize training courses for the field Veterinarians and animal owners; organize clinical camp etc. Along with these mass communication through radio, television and printed literature are also carried out. The Hospital has gained popularity not only in the city, but the cases are referred from the nearby districts also. In Veterinary Clinical Complex, state of art instruments like digital research microscope, phase contrast microscope, serum analyzer, haemato-analyzer, urine analyzer, centrifuge machine, incubator etc. are routinely used for the diagnosis of various diseased condition in animals by analysis of different samples. At Veterinary Clinical Complex, diagnostic facilities like digital x-ray machine, ultrasonography, thermography, endoscopy, ECG etc. are used for diagnosis of various affections in animals while treatments of small and large animals are taken care at different OPD wards like Small and Large animals medicine OPD wards. Small and Large animals Surgery OPD wards, Gynaecology and Obstetrics wards, small and large animals operation theatre and Equine operation theatre.

### Research Area:

- Various field of Diagnosis and treatment of animals related to Veterinary Medicine, Veterinary Surgery & Radiology as well as Veterinary Gynaecology and Obstetrics

### Research Project:

Continue					
Sr. No.	Name	Period	Funding Agency	Budget	PI and Co-PI
1	ICAR scheme (ELU) "Clinical Complex" (BH-2348)	2012-13	ICAR	36 Lakhs	PI : Dr. R. H. Bhatt
2	ICAR Scheme- (ELU) "Pet (Pups) Production/ Pet spa/ Pet boarding" (BH-2351)	2015-16	ICAR	50 Lakhs	PI : Dr. R. H. Bhatt Co-PI: Dr. R. J. Raval & Dr. Joice Joseph

### Achievement:

- ISVS Best poster presentation award (2011) – Dr. R. H. Bhatt
- ISVS Appreciation certificate (2012) - Dr. R. H. Bhatt

- Academic Brilliance Award (2014) - Dr. R. H. Bhatt
- Best article in Gaudarshan guide periodical (2017) - Dr. R. H. Bhatt
- ISVS Best oralpaper presentation award (2018) - Dr. R. H. Bhatt
- ISVS Best poster presentation award (2018) - Dr. R. H. Bhatt
- ISVS Appreciation certificate (2018) - Dr. R. H. Bhatt
- ISBD Best oral paper presentation award (2019) - Dr. R. H. Bhatt
- ISBD Best poster presentation award (2019) - Dr. R. H. Bhatt
- Certificate of Excellence in Peer reviewing (2020) - Dr. R. H. Bhatt
- Best Oral Paper Presentation Award-SVSBT(2016) – Dr. R. J. Raval
- Best Poster Presentation Award-SVSBT (2016) - Dr. R. J. Raval
- Best Research Paper Presentation Award ISSAR(2018)-Dr. R. J. Raval
- Best Oral Paper Presentation Award -SVSBT(2019) – Dr. R. J. Raval
- Outstanding Faculty Award- VISTA (2020)-Dr. R. J. Raval
- Second price “ Online paper Competition”- College of Veterinary Science & A.H., JAU, Junagadh (2020)- Dr. V. L. Parmar
- Second price “ Online paper Competition”- College of Veterinary Science & A.H., JAU, Junagadh (2020)- Dr. V. D. Dodia

### Research Paper Published:

1. Usadaiya, P. M., Bhatt R. H., Bhadaniya, A. R., Dodia, V. D., Gameti, K. S. 2020. Clinical Epidemiology of Fractures in Dogs: A Retrospective Study. *International Journal of Current Microbiology and Applied Sciences*, 9(9): 1097-1100. (NASS Rating -5.38)
2. Tank, D. P., Bhatt R. H., Dodia, V. D., Vadalia, J. V., Padaliya, N. R. 2020. Epidemiological Status of Lameness in horses: A Retrospective Study. *International Journal of Current Microbiology and Applied Sciences*, 9(9): 681-687. (NASS Rating -5.38)
3. Vadalia, J.V., Tank, P.H., Dodia, V.D., Talekar, S.H., Padaliya, N.R., Bhatt, R.H. 2020. Clinical Survey on Preputial Prolapse in Gir Bulls. *Indian Journal of Veterinary Science and Biotechnology*, 15 (3): 66-68. (NAAS Rating – 5.58)
4. Raval, R.J., Singh, V.K., Vala, K.B., Dhama, A.J. and Kavani, F.S. 2020. Effect protected nutrients supplementation on Follicular activity and hormone levels in prepubertal Jaffrabadi buffalo heifers. *Ruminant Science*, 9(1):71-76. (NAAS Rating – 5.00)
5. Raval, R.J., Dhama, A.J., Kavani, F.S. and Vijyeta, H.P. 2020. Interrelationships between ovarian dynamics and blood plasma profile in double Ovsynch treated Jaffrabadi heifers and buffaloes. *Indian Journal of Veterinary Science and Biotechnology*, 16(2, 3, & 4): 30-34. (NAAS Rating – 5.58)
6. Raval, R.J., Parmar, K.H., Dhama, A.J., &Kavani, F.S. 2021. Ovarian Follicular Dynamics, and Hormonal and Biochemical Profile in Post-Pubertal and Postpartum Jaffrabadi Buffaloes. *Indian Journal of Veterinary Science and Biotechnology*, 17(1): 26-30. (NAAS Rating – 5.58)
7. Brahmabhatt, N.N., Kumar B., Thakre, B. J., Bilwal, A.K. 2021. Haemato-biochemical characterization of fasciolosis in Gir cattle and Jaffrabadi buffaloes. *Indian Journal of Veterinary Science and Biotechnology*, 17(1): 26-30. (NAAS Rating – 5.58)

**Media Gallery**  
**Photo Gallery**



**Large animals Medicine OPD**



**Small animals Medicine OPD**



**Caesarian in buffalo**



**Gynaecological examination**



**Treatment of dog in the medicine ward**



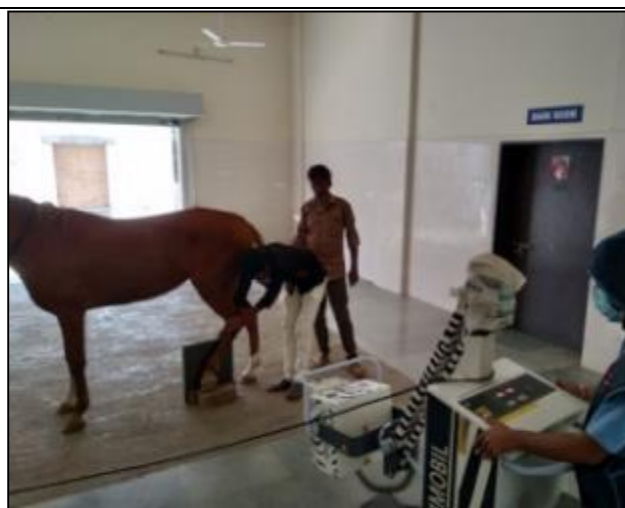
**Surgical management of small animals**



**Diagnostic facilities at VCC**



**Surgical management of various affections in large animals**



**Diagnosis of various disorders with radiography and endoscopy**



**Ultrasonography in small and large animals**

### Contact Us

#### Address:

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### Courses offered by the Department (optional/additional information)

#### U. G. Programme

#### Theory and Practical (As per VCI, MSVE, 2016)

Sr. No.	Course offer	Credit
1	Veterinary Clinical Practice-I ( Third Year)	0+1
2	Veterinary Clinical Practice-II (Fourth Year)	0+6

## 10. ANIMAL GENETICS & BREEDING

### Faculty Profile

Sr. N	Name	Designation	Email:	Mobile	Joining year	Qualification	Experience (Year)	Research papers
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<b>o.</b>								
1.	Dr. A. R. Ahlawat	Assoc. Prof. & Head	dranshuahlawat@gmail.com	9023894549	2006	PhD, MVSc	18	45
2.	Dr. A. D. Verma	Assist. Prof.	ankita.d_verma@yahoo.in	9586362621	2016	M.V.Sc.	05	08

### About Department

The Departmental Faculty is involved in the teaching of Old VCI and New VCI undergraduate, postgraduate as well as Polytechnic courses. For the purpose of easy understanding and quick learning, many educational videos, educational charts have been prepared. The laboratories of the department are equipped for daily and regular experimental demonstration purposes. For a convenient and interesting presentation, each topic is taught through power-point presentations, charts, videos and other audio-visual aids. Students are given hands-on training whenever required. The instructional guide for undergraduate students and students covering major areas of postgraduate subject are designed for their easier and better study. The department has maintained quality in teaching and research since its inception. Modern devices such as thermal cycler, real time PCR cycler, gel electrophoresis, two-dimensional gel electrophoresis, trinocular microscope, Mili-Q water system, BOD incubator, portable centrifugal machine, etc. In addition to the undergraduate and postgraduate laboratories in the department, there is a computer lab of 30 nos. with high-speed internet.



## Research Area

1. Studies on various factors affecting milk yield in Gir and Jafarabadi Buffalo.
2. Studies on Factors Affecting First Lactation Milk Yield
3. Principal Component Analysis
4. Studies on polymorphisms of A-1A-2 gene, DRB-2 gene, characterization of interleukin gene,
5. Sire Evolution Studies on Gir Bull
6. Studies on Genetic Polymorphisms of Keratin Intermediate Filament and Growth Hormone Gene in Ship Breeds of Gujarat.
7. Regression Equation for Prediction of Milk Yield in Gir Cattle.

## Research Project

Completed					
Sr. No.	Title of scheme	Duration	Funding Agency	Budget	Principal Investigator
1.	Molecular characterization of A1 and A2 $\beta$ -Casein genes in Gir cattle	2016-2018	JAU	--	PI- Dr. A. R. Ahlawat CO-PI Dr. Ankita D. Verma Dr. R. S. Tomar
2.	Molecular characterization of DRB3 gene in Gir cattle	2016-2018	JAU	--	PI- Dr. A. R. Ahlawat CO-PI Dr. Ankita D. Verma Dr. K. S. Murthy
3.	Principal component analysis to predict the life time milk yield using first lactation traits in Gir cattle.	2016-2018	JAU	--	PI- Dr. A. R. Ahlawat CO-PI Dr. Ankita D. Verma Dr. N. K. Rankaja
4.	Molecular characterization of Toll-Like Receptor-4 (TLR-4) gene in Jaffarabadi buffalo (Bubalus bubalis)	2012-2014	JAU	--	PI – Dr. G. S. Sonwane Co-PI Dr. V. B. Dongre Dr. P. H. Vataliya
5.	"Molecular Charecterization of Interleukin-8 (Il-8) gene in Jaffarabadi Buffalo (Bubalus Bubalis)."	2012-2014	JAU	--	PI - Dr. V. B. Dongre Co-PI: Dr. G. S. Sonawane, Dr. P. H. Vatliya

On-Going					
Sr. No.	Title of scheme	Duration	Funding Agency	Bud get	Principal Investigator
1.	Efficacy of Artificial Neural Network for Milk Prediction in Jaffarabadi Buffaloes.	May – 2020 to May-2021	JAU	--	PI: Dr. A. R. Ahlawat Co-PI: Dr. Ankita D. Verma, Dr. M.D. Odedra, Dr. V. V. Gamit, Dr. B.D. Savalia
2.	Efficacy of deep leaning meta -architecture for identification of Gir cattle	May – 2020 to May-2022	JAU	--	PI: Dr. A. R. Ahlawat Co-PI: Dr. Ankita d. Verma, Dr.M.D. Odedra, Dr. VV Gamit, Dr. DJ Patel
3.	Relative gene expression of Interferon tau stimulated genes in Jaffarabadi Buffalo	starting from May - 2020	JAU	--	PI: Dr. A.D. Verma Co-PI: Dr. A. R. Ahlawat, Dr. R.J. Raval, Dr.B.D. Savlia, Dr.D.B. Barad
4.	Genetic variation at Prolactin Rsa-I locus in Gir Cattle	Starting from May - 2020	JAU	--	PI: Dr. A.D. Verma Co-PI: Dr. A. R. Ahlawat, Dr. B.D. Savlia, Dr. J. K. Chaudhary

### Achievement

- Best Paper Presentation Award (2020) – Dr. A. R. Ahlawat
- Most Innovative Article Award (2020) - Dr. A. R. Ahlawat
- Best Scientist Award (2020) - Dr. A. R. Ahlawat

### List of Recent Research Publications

1. P. S. Chikhaliya, A.R. Ahlawat, G.S. Solanki, R.J. Raval, K.B. Vala and A.D. Verma, Physical Seminal Attributes of Gir Bull Semen, Int.J.Curr.Microbiol.App.Sci.2018.7(7): 1152-1159.
2. P.S. Chikhaliya, A.R. Ahlawat, V.K. Singh, H.P. Vijyeta, M.D. Odedra and K.B. Vala Effect of Different Concentrations of Taurine on Certain Biochemical Parameters During Cryopreservation of Gir Bull Semen, Int.J.Curr.Microbiol.App.Sci.2018.7(7): 1441-1447.

3. B.A. Pata, M.D. Odedra, A.R. Ahlawat, H.H. Savsani and T.K. Patbandha  
Survey on Housing and Feeding Practices of Buffaloes Owners in Junagadh and Porbandar District of Gujarat, *Int.J.Curr.Microbiol.App.Sci.*2018.7(8): 1195-1202.
4. B.A. Pata, M.D. Odedra, A.R. Ahlawat, H.H. Savsani and T.K. Patbandha and M.P. Sarma  
Survey on Socio Economic and Milking Patterns of Buffaloes Owners in Junagadh and Porbandar District of Gujarat, *Int.J.Curr.Microbiol.App.Sci.*2018.7(8): 1203-1212.
5. Naseer A. Baba , Manjit Panigrahi, Ankita D. Verma , Abdul Sadam, Sourabh Sulabh, Supriya Chhotaray, Subhashree Parida, Narayanan Krishnaswamy, Bharat Bhushan.  
Endometrial transcript profile of progesterone- regulated genes during early pregnancy of Water Buffalo (*Bubalus bubalis*). (2019), 54 (1), 100-107.
6. K. B. Savalia, A. R. Ahlawat, V. V. Gamit, S. S. Parikh and A. D. Verma  
Recently Recognized Indigenous Cattle Breeds of India: A Review, *Int. J. Curr. Microbiol. App. Sci.* 2019.8 (12): 161-168.

### Media/ Photo Gallery



**Departmental classrooms**



**Molecular Laboratory - II**



**Animal Cytogenetics Laboratory**



**Cold Room**



**Mili-Q Water System**



**Molecular Laboratory - I**



**Computer Lab**

**Contact Us:**

**Address:**

**Dr. A. R. Ahlawat**

Associate Professor & Head

Department of Animal Genetics & Breeding

College of Veterinary Science & A.H., Junagadh

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Mobile: 9023894549

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**Courses offered by the Department (optional/additional information)**

**Under-graduate Programme (As per VCI MSVE, 2016)**

Sr. No.	Course Title	Credit
1.	Animal Genetics & Breeding	3 + 1 = 4
	<b>Theory</b>	

	Unit 1: Biostatistics and computer application	
	Unit 2: Principle of Animal and Population Genetics	
	Unit 2: Principal of Animal Breeding	
	<b>Practical</b>	
	Unit 1: Biostatistics and computer application	
	Unit 2: Principle of Animal and Population Genetics	
	Unit 2: Principal of Animal Breeding	

<b>As per Old VCI</b>				
<b>Sr. No.</b>	<b>Course no</b>	<b>Course Title</b>	<b>Credit</b>	<b>Semester</b>
1.	AGB-111	Biostatistic and computer application	2 + 1 = 3	First
2.	AGB - 121	Principle of Animal and Population Genetics	2 + 1 = 3	Second
3.	AGB-311	Livestock and poultry breeding	2 + 1 = 3	Third
4.	VMD - 215	Zoo / Wild Animal Breeding Management, Nutrition and Health Care	1 + 1 = 2	Ninth
5.	VMD - 215	Pet Animal Breeding, Management, Nutrition and Health Care	1 + 1 = 2	Ninth

#### **Under-graduate Programme:**

<b>Sr. No.</b>	<b>Course no</b>	<b>Course Title</b>	<b>Credit</b>
1	AGB-601	Animal Cytogenetics and Immunogenetics	2+1=3
2.	AGB-602	Molecular Genetics in Animal Breeding	2+1=3
3.	AGB-603	Population and Quantitative Genetics in Animal Breeding	2+1=3
4.	AGB-604	Selection Methods and Breeding System	3+1=4
5.	AGB-605	Biometrical Techniques in Animal Breeding	3+1=4
6.	AGB-606	Conservation of Animal Genetics Resources	2+0=2
7.	AGB-607	Cattle and Buffalo Breeding	2+1=3
8.	AGB-608	Small Farm Animal Breeding (sheep, goat, swine and rabbit)	2+0=2
9.	AGB-609	Poultry Breeding	2+1=3
10.	AGB-610	Laboratory Animal Breeding	1+0=1
11.	AGB-691	Master's seminar	1+0=1
12.	AGB-699	Master's research	20

#### **Ph.D. Programme:**

<b>Sr. No.</b>	<b>Course no</b>	<b>Course Title</b>	<b>Credit</b>
1	AGB-701	Recent advances in animal genetics	2+0=2
2.	AGB-702	Recent Trends in Animal Breeding	2+0=2
3.	AGB-703	Advances in Biometric Genetics	2+1=3
4.	AGB-704	Advances in Selection Methodology	2+1=3
5.	AGB-705	Bioinformatics in Animal Genetics and Breeding	2+0=2

6.	AGB-706	Advances in molecular cytogenetics	2+0=2
7.	AGB-707	Utilization of non-addictive genetics variants in farm animals	2+1=3
8.	AGB-791	Doctoral Seminar-1	1+0=1
9.	AGB-792	Doctoral Seminar-2	1+0=1
10.	AGB-799	Doctoral Research	45

## 11. ANIMAL NUTRITION

### Faculty Profile

Sr.no.	Name	Designation	E-mail	phone	Joining year	qualification	experience	publication
1	Dr. H. H. Savsani	Assoc. Professor & Head	<a href="mailto:hhsavsani@ja.u.in">hhsavsani@ja.u.in</a>	9427502728	2013	Ph.D.(Animal Nutrition)	8 years	70
2	Dr. Jignesh A. Chavda	Assistant Professor	<a href="mailto:drjignesh86@gmail.com">drjignesh86@gmail.com</a>	9978058887	2016	M.V.Sc.(Animal Nutrition)	4.5 years	11
3	Ankur m desai	Livestock inspector	<a href="mailto:ankurd740@gmail.com">ankurd740@gmail.com</a>	8511292876 6351217843	2008	LI,DME	13 years	-

### About Department

The Department of Animal Nutrition was established in 2008 for the purpose of teaching and research in the field of Animal Nutrition to undergraduate and postgraduate students. This subject is useful and important in veterinary nutrition, veterinary medicine and disease prevention. The department has maintained quality in education and research since its inception. Modern devices such as artificial rumen, bomb calorimeters, infrared spectroscopy, fiber-protein-fat analyzers and competent professors have always fascinated postgraduate students. The main topics of research are rumen protected feed additives, *in vitro* digestibility, non-conventional feed resources, utilization of herbal compounds etc. The department have well established analytical laboratory for undergraduate and postgraduate experiments.

### Research Area

- 1 Rumen protected feed additives
- 2 *In vitro* digestibility
- 3 Non conventional feed resources
- 4 Utilization of herbal compounds

## **Achievements:**

### **Dr. H. H. Savsani**

- 1 Best Ph.D. thesis award - 2012
- 2 Best Gujarati Article- 2013
- 3 Young scientist award - 2016
- 4 Best poster presentation award - 2018
- 5 Best oral presentation award - 2018
- 6 Best Gujarati Article- 2019
- 7 Best poster presentation award - 2019
- 8 Best Paper Presentation award -2020

### **Dr. J. A. Chavda**

- 1 Best poster presentation award - 2018
- 2 Best oral presentation award - 2019
- 3 Best poster presentation award - 2019
- 4 Best Paper Presentation award -2020

## **RESEARCH PUBLICATION**

- Ramesh J Padodara, Tapan R. Kumbhani, Vinay A. Kalaria, Vivek Singh, Harish H. Savsani, Vijay M. Mehta 2020 A study of histochemical distribution in full term placental cotyledon of Gir cows and Jaffrabadi buffaloes International Journal of Livestock Research International11(2):94-97
- S. P. Trivedi, S. S. Patil, D. D. Garg, H. H. Savsani, M. M. Pawar, V. K. Singh, J. A. Chavda and P. C. Boradiya 2020 Effect of dietary supplementation of organic chromium on carcass characteristics and haemato-biochemical profile in Broiler chickens International Journal of Livestock Research International 10(9):105-112
- Karmakar Neha Debasish and Sudhanya 2020 Essential oils as a feed additive in poultry Poultry punch- Monthly poultry magazine National
- Ramesh J Padodara, Hardeep P Vijyeta, Suryakant S Parikh, Arjun B Odedra, Harish H Savsani, Vijay M Mehta 2020 Gross-morphological studies on placenta and fetal cotyledons of Gir cows and Jaffrabadi buffaloes. Indian Journal of Veterinary Anatomy National32(2):82-83
- A S Patel, A R Bariya, S N Ghodasara, J A Chavda, S S Patil 2020 Total carotene content and quality characteristics of pumpkin flavoured buffalo milk Heliyon International 6(7):E04509

**Media gallery**  
**Photo Gallery**



Feed & Fodder analysis Lab.- 1



Energy Metabolism Lab.- 1



Feed technology Lab.- 1





ANSICON-2018



ANSICON-2018



ANSICON-2018



ANSICON-2018



IDP-ANN-2021



IDP-ANN-2021



IDP-ANN-2021

**Contact detail :**

**Address-**

Dr. H. H. SAVSANI  
 M.V.Sc., Ph.D., Animal Nutrition,  
 Associate Professor and Head,  
 Mobile No. 9427502728,  
 Email: hhsavsani@jau.in  
 Department of Animal Nutrition  
 Veterinary college.  
 J.A.U.-Junagadh,362001(Gujarat)

**Courses offered at UG /PG/Polytechnic:**

A) No. of UG courses being offered:

New Syllabus as per VCI (MSVE- 2016)				
Sr. no.	Course Title		Credits	Year
1	Animal Nutrition		3+1 = 4	Second
Old Syllabus as per VCI				
Sr. no.	Course no.	Course Title	Credits	Semester
1	ANN-111	Principles of Animal Nutrition & Feed Technology	2+1=3	I
2	ANN-121	Applied Animal Nutrition -1(Ruminants)	2+1=3	II
3	ANN-211	Applied Animal Nutrition -2(Non ruminants Poultry and Laboratory animals )	2+1=3	III

**B) P.G. Courses:**

Sr. no.	Course no.	Course Title	Credits
1	ANN 601	Animal Nutrition – Energy and Protein	3+0
2	ANN 602	Animal Nutrition – Minerals, Vitamins and Feed Additives	3+1

3	ANN 603	Feed Technology	1+1
4	ANN 604	Feed conservation, storage and quality control	2+2
5	ANN 605	Ruminant nutrition	2+1
6	ANN 606	Non-ruminant nutrition	1+1
7	ANN 607	Nutrition of companion/laboratory, wild and zoo animals	2+1
8	ANN 608	Research techniques in animal nutrition	1+3
9	ANN 609	Non conventional feed stuff and toxic constituents/ anti metabolites in animal feedstuff	2+1
10	ANN 691	Master's seminar	1+0
11	ANN 699	Master's research	20
12	ANN-701	Modern concepts of feeding ruminants and forage utilization	3+0
13	ANN-702	Modern concepts of feeding monogastric animals	2+0
14	ANN-703	Nutrition and rumen fermentation	1+1
15	ANN-704	Advances in micronutrients	1+0
16	ANN-705	Advanced techniques in nutrition and research	1+2
17	ANN-706	Advances in feed technology	1+1
18	ANN-707	Clinical Nutrition	1+1
19	ANN-708	Nutrient and Drug interaction	2+0
20	ANN-709	New feed resources and toxicants in animal feeding	2+0
21	ANN-791	Doctoral Seminar-I	1+0
22	ANN-792	Doctoral Seminar – II	1+0
23	ANN-799	Doctoral Research	45

## 12. LIVESTOCK PRODUCTION MANAGEMENT

### Faculty Profile

Sr. No	Name	Designation	Qualification	Email	Phone	Joining Year	Experience	Publication
1	Dr.M.D.O dedra	Associate Professor &Head	Ph.D. (L.P.M)	drmdodedra72@gmail.com	9574839225	1995	26 year	19
2	Dr. V. V. Gamit	Assistant Professor	M.V.Sc. (L.P.M)	vimmy.rouge@gmail.com	9601286083	2015	6 year	11

3	Dr.Mrs.Krishna C. Gamit	Assistant Professor	M.V.Sc. (L.P.M)	krishna29692 vet@gmail.com	909927 2603	2016	4 year	05
4	Mr.V.M. Kodiyatar	Laboratory Technician	B.Sc.	vikramkodiya tar49@gmail	971263 8713	2011	11 year	-

### About Department:

This department has become functional from 2008-09 and at present it is accommodated in College of Veterinary Science & A.H. building at J.A.U. campus, Junagadh. Currently department is active in teaching of the U.G., P.G and Ph.D students in the subject of livestock production Management. Department has very good facility of equipment and instruments to impart practical knowledge to students. Modern devices such as somatic cell counters, mastitis detectors, egg incubators and competent professors have always attracted postgraduate students. The department has Milk Analytical Laboratory, undergraduate and postgraduate laboratories.

### Departmental Projects Completed / On-going: Livestock Production Management

1	Efficacy of artificial neural network for milk Production in Jaffrabadi buffaloes	On-going Co-PI:- Dr.M.D.Odedra
2	Efficacy of deep learning met architecture for identification of Gir cattle	On-going Co PIs:- Dr.M.D.Odedra
3	Assessment of hygienic milk production practices adopted by dairy farmers for quality milk production	Completed Co PIs:- Dr.Krishna Gamit

### Awards/ Medals Received by the Faculty: Livestock Production Management

- ✓ Boy's hostels of veterinary college Junagadh- Gokulesh and Govardhan secured second and third rank among all the hostels of J.A.U., Junagadh campus during clean hostel competition
- ✓ Research paper of Dr. M. D. Odedra has secured first position for the paper entitled "Environmental effects on first lactation traits in Jaffarabadi buffaloes" in online paper presentation competition organized by COVSAH,J.A.U.,Junagadh on 30-May 2020.





### List of Research Publication and Popular article: Livestock Production Management

Pata, B.A., **Odedra, M.D.**, Savsani, H.H., Ahlawat, A.R., Patbandha, T.K. and Odedara, A.B., 2019. Breeding, calf and health management practices opted by buffalo owners in Junagadh and Porbandar districts of Gujarat: A comparative study. *J. Anim. Res*, 8(3), pp.2426-2435.

Savalia, K.B., Ahlawat, A.R., **Gamit, V.V.**, Parikh, S.S. and Verma, A.D., 2019. Recently recognized indigenous cattle breeds of India: A review. *International Journal of Current Microbiology and Applied Sciences*, 8(12), pp.161-168.

Ahlawat, A.R., **Odedra, M.D.** and Dongre, V.B., 2020. Breeding Guidelines to Reduce Genetic Disorders in Dogs. *Biotica Research Today*, 2(9), pp.886-888.

### Photographs of Laboratories

U. G. Laboratory	Museum
	
	

### Contact Detail:

Dr. M. D. Odedra

M.V.Sc., Ph.D., LPM

Associate Professor and Head

Mobile No. 9574839225

E. mail- [drmdodedra72@gmail.com](mailto:drmdodedra72@gmail.com)

Dist.: Junagadh, Gujarat

**Courses offered at UG /PG/Polytechnic:****UG Course**

New Syllabus as per VCI (MSVE- 2016)				
Sr. no.	Course Title		Credits	Year
1	Livestock Production Management		4 + 2 = 6	First
Old Syllabus as per VCI				
Sr. no.	Course no.	Course Title	Credits	Semester
1	VMD-512	Zoo/Wild animal, Breeding, Nutrition, Management, and Health care	1+1=2	IX
2	VMD-513	Pet animal Breeding, Management, Nutrition and Health care	1+1=2	IX

**P.G /Ph. D Courses:**

Sr. no.	Course no.	Course Title	Credits
1	LPM-601	Cattle and Buffalo Production and Management	2+1
2	LPM-602	Sheep and Goat Production and management	2+1
3	LPM-603	Swine Production and Management	1+1
4	LPM-604	Laboratory animal Production and Management	1+1
5	LPM-605	Shelter Management	1+1
6	LPM-606	Principles of environment hygiene and waste management	2+0
7	LPM-607	Climatology and animal production	1+0
8	LPM-608	Poultry farm and hatchery management	2+1
9	LPM-609	Farm animal behaviour	1+0
10	LPM-610	Integrated Livestock Farming system	2+1
11	LPM-611	Equine production and management	1+1
12	LPM-612	Wild life management and conservation	2+0
13	LPM-613	Livestock business management	1+1
14	LPM-691	Master's Seminar	0+1

15	LPM-699	Master's Research	20
16	LPM-701	Advances in cattle and buffalo production and management	3+0
17	LPM-702	Advances in sheep and goat production and management	2+0
18	LPM-703	Advances in swine production and management	2+1
19	LPM-704	Advances in Laboratory animal production and management	1+0
20	LPM-705	Advances in poultry production and t	2+1
21	LPM-706	Advances in Environmental management	1+1
22	LPM-707	Advances in equine management	2+0
23	LPM-791	Doctoral Seminar-I	0+1
24	LPM-792	Doctoral Seminar-II	0+1
25	LPM-799	Doctoral Research	45

### 13. LIVESTOCK PRODUCTS TECHNOLOGY

#### Faculty Profile-

Sr. No	Name	Designation	Qualification	Email	Phone	Joining Year	Experience	Publication
१	Dr. G.P. Sabapara	Associate Professor & Head	gpsabapara@gmail.com	9879469255	1994	Ph.D.(Livestock Production Management)	27	44
२	Dr. A. S. Patel	Assistant Professor	dr.ajaypatelvet2012@gmail.com	9725291550	2016	M.V.Sc. (Livestock Products Technology)	6	21
३	Dr. A.R. Bariya	Assistant Professor	akshaybariia196@gmail.com	9586852486	2016	M.V.Sc. (Livestock)	4	15

						Products Technolo gy)		
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### About Department

Department of Livestock Products Technology has been working in the area of teaching, research and extension education since establishment of College of Vet.Sc. & A.H., JAU, JUNAGADH. Currently department is active in teaching of the U.G. students in the subject of livestock products technology with three different courses namely (1) Milk and Milk Products Technology, (2) Abbatoir Practices and Animal Products Technology and (3) Meat Science. Additionally arranging the visit of students to milk and meat processing plants is also carried out to impart the practical knowledge about various activities carried out there. Department is having facility for chemical and microbial analysis of milk sample, adulteration testing of milk as well as equipment are available for milk products preparation for research purpose. Different meat and egg processing and testing equipment are also available and use to prepare various meats and egg products for demonstration and research purpose.

### Research Area

१. Value addition in animal based products
२. Food quality analysis of animal based products
3. Food authentication
४. Anti-Oxidants applications in animal based products
५. Shelf life evaluation and application of preservation techniques in animal based products
६. Application of various packaging techniques in animal based products

### Research project

Departmental Projects Completed					
Sr. No..	Name	Duration	Funding agency	Budgat	PI/CoPI
१	Detection of common adulterants in milk sold (open and branded) in and around the Junagadh.	2013-2014		--	PI – Shekhar Badhe Co-PI:- Sagar Chand
२	Incorporation of Cucurbita pepo (pumpkin) pulp for the preparation of value added flavoured buffalo milk	2016-2018		--	PI:- Dr. Ajay S. Patel Co PIs:- Dr. Akshay R. Bariya, Dr. Sanjay N. Ghodasara, Dr. Jignesh A. Chavda
	Phenotypic and Molecular characterization of extended-spectrum $\beta$ -lactamase producing (ESBL)	2017-2018		--	PI:- Dr. Akshay R. Bariya Co PIs:- Dr. Ajay S. Patel, Dr. Sanjay



	Escherichia coli from poultry in Junagadh, Gujarat				N. Ghodasara, Dr. B.B. Javia and Dr. D.B. Barad
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### Achivements

Sr. No.	Name of Faculty	Award	Year
1	Dr. G. P. Sabapara	Maheshwar Mishra Award for best Practical research	2019
2	Dr. A.S. Patel	Young Scientist Award	2020

### Research Paper

- Patel, A. S., Bariya, A. R., Ghodasara, S. N., Chavda, J. A., & Patil, S. S. (2020). Total carotene content and quality characteristics of pumpkin flavoured buffalo milk. *Heliyon*, 6(7), e04509.

### Photographs of Laboratories



Dairy Technology Laboratory



Slaughtering unit/ Handling Room



Meat Technology Lab

**Contact us**

Dr. G.P. Sabapara  
 M.V.Sc., Ph.D., Livestock Production Management  
 Associate Professor and Head  
 Mobile No. 9879469255,  
 Email: gpsabapara@gmail.com

**Courses offered by the Department (optional/additional information)**  
**UG Programme**

Sr.No.	Course offered	Credits
1	Livestock Products Technology	2+1
	<b>Theory</b>	
	Unit:1 (Milk and Milk Products technology)	
	Unit:2 (Wool Science)	
	Unit:3 (Abattoir Practices and Animal By-products Technology)	
	Unit:4 (Meat Science)	
	<b>Practical</b>	
	Unit:1 (Milk and Milk Products technology)	
	Unit:2 (Wool Science)	
	Unit:3 (Abattoir Practices and Animal By-products Technology)	
	Unit:4 (Meat Science)	

**PG Programme**

Sr.no..	Code	Course	Credit
၁	LPT601	Fresh meat technology	၁+၁
၂	LPT602	Meat processing, packaging, quality control and marketing	၂+၁
၃	LPT603	Poultry and fish products technology	၂+၁
၄	LPT604	Egg and egg products technology	၁+၁
၅	LPT605	Abattoir and Poultry Processing Plant Practice	၁+၁
၆	LPT606	Slaughter house by products technology	၂+၁
၇	LPT607	Processing and marketing of wool	၂+၁
၈	LPT608	Market Milk Processing and Dairy Plant Practice	၂+၁
၉	LPT609	Quality Control of Milk and Milk Products	၁+၁

१०	LPT610	Technology of Milk Products	२+१
११	LPT611	Biotechnology of Food of Animal Origin	१+१
१२	LPT612	In-plant training (non-credit)	०+२
१३	LPT691	Master Seminar	१+०
१४	LPT699	Master Research	२०

### PhD Programme

Sr. No.	Course No.	Title of Course	Credit Hours
1	LPT 701	ADVANCES IN ABATTOIR PRACTICES AND ANIMAL BYPRODUCTS UTILIZATION	2+1
2	LPT 702	ADVANCES IN FRESH AND PROCESSED MEAT PRODUCTS TECHNOLOGY	3+1
3	LPT 703	ADVANCES IN POULTRY PRODUCTS TECHNOLOGY	2+1
4	LPT 704	ADVANCES IN MILK AND MILK PRODUCTS TECHNOLOGY	3+1
5	LPT 705	ADVANCES IN QUALITY CONTROL OF LIVESTOCK PRODUCTS	2+0
6	LPT 706	BIOTECHNOLOGICAL TECHNIQUES AND PROCESSES IN ANIMAL PRODUCTS	1+1
7	LPT 791	DOCTORAL SEMINAR I	1+0
8	LPT 792	DOCTORAL SEMINAR II	1+0
9	LPT 799	DOCTORAL RESEARCH	45

## 14. LIVESTOCK FARM COMPLEX

### Faculty Profile

Sr. No.	Name of Faculty	Designation	E-Mail Id	Mobile Number	Joining Year	Qualification	Experience (Yr.)	Publication (No. of Research Paper)
1	Dr. K. Ravikala	Professor and Head	k_ravikala60@yahoo.co.in	9898029811	1984	Ph.D.	36	36
2	Dr. Deendayal	Associate Professor	drddgarg@gmail.com	8780765258	2012	Ph.D.	12	26
3	Dr. S. B.	Assistant	sbbhatt@jau.in	9737674	2015	Ph.D.	6	20

	Bhatt	Professor		033				
4	Dr. D. G. Vaghamaashi	Assistant Professor	dgvaghamaashi@gmail.com	9510402088	2016	M.Sc.	4.5	04
5	Dr. J. R. Damor	Assistant Professor	damor.jayendra@gmail.com	9879231636	2016	M.Sc.	4.5	03

### About Department

As per norms of VCI Department of LFC is functional from the year 2014 to facilitate Undergraduate practical teaching. Consequently layout of LFC as per the requirement of new VCI is submitted and approved. New LFC construction is initiated in the year 2015 with the layout of 4.27 crores from the State Govt. The total land holding of LFC is 13.7 Hec. It is first in the country fulfilling the VCI norms and housing all the native breeds of Saurashtra region.

### Objectives:

To train UG students in the following aspects

- Housing, feeding and breeding management of Dairy Animals, Sheep & Goat.
- Management of Poultry & Avian species.
- Rearing of Rabbits and Management of Pack Animals.
- To inculcate entrepreneurial skills for UG students under ETP Programme on Broiler and Egg production.
- Fodder production.
- Preservation of feed and fodder.
- Labour management and Record keeping.
- To impart facilities for PG experiments.
- To provide guidance/services to Livestock keepers.

### Different Units of LFC:

**Dairy Unit:** Different categories of Gir Cattle and Jaffrabadi Buffaloes are maintained.

**Sheep/Goat Unit:** It includes sheep breeds of Patanwadi, Marwari and Duma of Saurashtra region. Goat unit is comprised of Surti, Marwari, and Zalawadi breeds.

**Poultry Unit:** Rearing of Color Broilers and Layer stock include White leghorn, RIR, Kadaknath and indigenous breeds. Aviary includes Duck, Goose, Turkey and Guinea fowl.

**Rabbit Unit:** Rabbits are maintained under two housing systems as Deep litter and Cage system. Breeds as New Zealand White, Grey, Dutch are maintained.

**Pack Animal Unit:** Two horses and two camels native of Saurashtra region are maintained.

**Fodder Production Unit:** To supply the daily requirement of green fodder to Livestock Cultivation of common fodder crops like Maize, Jowar, oat, Lucerne, Bullet Napier, Zinzivo Grass, Moringa and Sunflower and their preservation is carried out.

Sr. No.	Name of Unit	Herd/Flock Strength
1	Dairy Unit	07
2	Sheep & Goat Unit	80
3	Pack Animal Unit	04
4	Poultry Unit	327
5	Rabbit Unit	70

6	Fodder Unit (Cultivable Land in Hec.)	10
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**Experiential Learning Unit (ELU):**




As per VCI course curriculum, Entrepreneurial Training Programme course is offered to undergraduate students of B.V.Sc. & A. H. to inculcate entrepreneurial skills. Two poultry units as Brooder-cum-Grower house and Aviary units (153.36 sq. m. each) were constructed with ICAR development grant of 36 Lakhs in the year 2013-14. Brooder-cum-Grower house is utilized for rearing chicks from day old to growing stage. The aviary unit is utilized to maintain different Poultry species for undergraduate teaching.

**Details of ELU**

Year	Number of broiler batches reared	Number of layer batches reared	No. of Students Benefitted
2014-15	1 (500 Chicks)	1 (150 Chicks)	27
2015-16	2 (400 Chicks)	-	32
2016-17	1 (200 Chicks)	1 (200 Chicks)	35
2017-18	1 (300 chicks)	1 (200 Chicks)	28
2018-19	-	-	48
2019-20	-	1 (200 Chicks)	14
2020-21	-	-	04

**Media Gallery**  
**Photo Gallery**

<b>Practical Training of UG students in Poultry &amp; Livestock Farm Practices</b>	
	
<b>Brooding of Colour broiler chicks</b>	<b>Egg collection</b>
	

<b>Vaccination of Goat</b>	<b>Ear tagging of Goat</b>
	
<b>Pregnancy Diagnosis in Cow</b>	<b>Handling of Rabbit</b>
	
<b>Exercise of Horse</b>	<b>Silage Making</b>

<b>LFC Farm Buildings</b>	
	
<b>Office Building</b>	<b>Indigenous Cattle Shed</b>
	
<b>Stable &amp; Bull Shed</b>	<b>Camel Shed</b>

	
<p align="center"><b>Calf Pen</b></p>	<p align="center"><b>Calving Pen</b></p>
	
<p align="center"><b>Fodder Godown</b></p>	<p align="center"><b>Rabbitary</b></p>
	
<p align="center"><b>Sheep &amp; Goat Pen</b></p>	<p align="center"><b>Poultry-Layer House</b></p>

**Contact us:**

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**Courses offered by the Department (optional/additional information)**

**Under Graduate Programme**

**Theory and Practical (As per VCI, MSVE, 2016)**

<b>Sr. No</b>	<b>Course Offer (Practical)</b>	<b>Credit</b>
1	Livestock Farm Practices	0 + 2