







Department of Veterinary Public Health & Epidemiology Veterinary College, AAU, Anand



Profile (In Brief):

- The subject of Food Hygiene was introduced along with Department of Veterinary Pathology right from 1966. The laboratory and office of the Pathology department was used for under graduate teaching. The separate Department of Veterinary Public Health was established in the year 1975, which included the laboratory as well as poultry packing plant. The post-graduate programme was initiated at this department in the year 1979. After the implementation of Veterinary Council of India (VCI) Curriculum, the course of Veterinary Public Health was started at under graduate teaching. In addition, the department is also holding the charge of newly formed Livestock Products Technology (LPT) department as per Veterinary Council of India (VCI) Curriculum and imparting teaching at under graduate level. As per the new VCI curriculum has been introduced which has brought Epidemiology under the Department of Veterinary Public Health and thereby renaming it as Department of Veterinary Public Health and Epidemiology (VPE).
- The department is also helping to the postgraduate students of other departments' viz. medicine, pharmacology, microbiology, gynecology, surgery etc. The diagnostic services are also rendered by examining the clinical samples submitted by medical colleges / private clinics / university health center as well as veterinary clinics of the college and other parts of the state.
- Department is actively engaged in the teaching of Veterinary Public Health to U.G. as well as P.G. students. Department has examined various samples from animals as well as humans to study the prevalence of zoonotic infections including the etiological significance of fungi and actinomycetes in the various clinical disorders of animals and man. In addition, the Post Graduate students worked on public health aspects of various diseases like Aspergillosis, Leptospirosis, Toxocariasis, Candidiasis, Cryptococcosis, Dermatophytosis, Staphylococcosis, Pseudomoniasis etc. Continuous research on Food microbiology is going on in the department. The department is pioneer in meat species identification by immunological and molecular techniques.

Faculties:

Sr. No	Name with photograph	Designation	Phone (O)	Cell No	Inter Com No.	E-Mail
1	<p>Dr. M. N. Brambhatt</p> 	Professor & Head	02692-225900	9998009974	900	mnbrahmbhatt2003@yahoo.com
2	<p>Dr. J. B. Nayak</p> 	Associate Professor	02692-225957	9898585460	957	jbn_anand@yahoo.com
3	<p>Dr. B. C. Parmar</p> 	Associate Professor	02692-225957	9974143357	957	bcparmar2002@yahoo.com
4	<p>Dr. J. H. Chaudhary</p> 	Assistant Professor	02692-225900	9510932575	900	jitvph007@gmail.com

Major Activities:

I. Teaching

A. UG Courses

COURSE NO.	COURSE TITLE	CREDIT
VPE-311	MILK & MEAT HYGIENE, FOOD SAFETY & PUBLIC HEALTH	2+1=3
LPT-311	MILK & MILK PRODUCT TECHNOLOGY	1+1=2
LPT-312	ABATTOIR PRACTICES & ANIMAL PRODUCT TECHNOLOGY	1+1=2
VPE-321	VETERINARY EPIDEMIOLOGY & ZONOSSES	2+1=3
LPT-321	MEAT SCIENCE	1+1=2
VPE-511	ENVIRONMENT & ENVIRONMENTAL HYGIENE	2+1=3

B. Post Graduate Courses

CODE	COURSE TITLE	CREDITS
VPH 601	ELEMENTS OF VETERINARY PUBLIC HEALTH	1+1
VPH 602	BACTERIAL AND RICKETTSIAL AGENTS OF PUBLIC HEALTH SIGNIFICANCE	2+1
VPH 603	VIRAL, FUNGAL AND PARASITIC AGENTS OF PUBLIC HEALTH SIGNIFICANCE	2+1
VPH 604	ZONOSSES AND PUBLIC HEALTH	2+1
VPH 605	PRINCIPLES OF FOOD HYGIENE AND SAFETY	2+1
VPH 606	FOOD-BORNE INFECTIONS AND INTOXICATIONS	2+1
VPH 607	MEAT AND MILK HYGIENE	2+1
VPH 608	ENVIRONMENTAL POLLUTION AND SAFETY	3+1
VPH 609	FISH, FISH PRODUCTS AND SEAFOOD HYGIENE	1+1
VPH 610	BIOTERRORISM AND DISASTER MANAGEMENT	1+1
VPH 691	MASTER'S SEMINAR	1+0
VPH 699	MASTER'S RESEARCH	20

C. Ph.D Courses

VPH 701	CURRENT TOPICS IN VETERINARY PUBLIC HEALTH	2+1
VPH 702	EMERGING AND REEMERGING ZONOSSES	2+1
VPH 703	QUALITY CONTROL OF ANIMAL FOOD PRODUCTS	2+1

VPH 704	OCCUPATIONAL HEALTH HAZARDS	2+1
VPH 705	DISPOSAL AND RECYCLING OF WASTE	2+1
VPH 706	BIOHAZARDS, BIOSECURITY AND DISASTER MANAGEMENT	2+0
VPH 707	FOOD PLANT SANITATION	2+1
VPH 708	ADVANCES IN ENVIRONMENTAL POLLUTION CONTROL	2+1
VPH 790	SPECIAL PROBLEM	0+2
VPH 791	DOCTORAL SEMINAR I	1+0
VPH 792	DOCTORAL SEMINAR II	1+0
VPH 799	DOCTORAL RESEARCH	45

II. Research

A. Research Projects Completed(No., Title, Agency, Period, Budget Outlay, PI/Co-I)

B. Research Projects On going (No., Title, Agency, Period, Budget Outlay, PI/Co-I)

1. Modernization of diagnostic facilities - Zoonotic disease and Campylobacteriosis. - XIITH Five Year Plan Govt. of Gujarat

Budget Head: 12972

Notification No. AAU/RES/PLN-2/ADP 2008-09/6305-54/08

➤ **Objectives :**

- a) Collection of samples from animal and man and isolation and identification of the causative organisms by using molecular techniques
- b) To establish the epidemiological relationship with the contact of animal and disease
- c) To know prevalence of important zoonotic diseases in the area
- d) To study incidence of Campylobacteriosis in man and animal including birds
- e) To explore the use of molecular based techniques in rapid diagnosis of zoonotic diseases
- f) To know the carriage of campylobacter in apparently healthy mammals and avians.

➤ **Name and Designation of Officer In charge**

Dr.M.N.Brahmbhatt, (P.I)

Professor & Head

Dr. J.B. Nayak (Co. P.I)

Associate Professor

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

M.V.Sc- 37 Ph.D-05

P.G. Thesis Submitted: For Masters' Degree (M. V. Sc.)

Sr. No.	Title of Thesis	Name of student	Name of guide	Year
1	Studies on the occurrence of aerobic microorganism in meat associated with food infections and intoxications	M.N.Brahmbhatt (04-1899-87)	Dr. M. Pal	1990
2	Studies on the incidence of Aspergillosis in poultry and poultry handlers	C.V.Savalia (04-1905-87)	Dr. M. Pal	1990
3	Sanitary quality of community drinking water supplies at G.A.U., Anand Campus, Anand	A.K. Chaurasia (04-2128-88)	Dr. J. M. Anjaria	1990
4	Human and animal infections caused by <i>Candida albicans</i>	V.J. Jadhav (04-4213-98)	Dr. M. Pal	2001
5	Role of Zoophilic dermatophytes in the etiology of human ringworm	Kakoli Ahmed (04-4214-98)	Dr. M. Pal	2001
6	Meat speciation by molecular and serological techniques	J.M.Thumbar (04-4597-2000)	Dr. M. N. Brahmbhatt	2002
7	Isolation and identification of <i>Escherichia coli</i> from retail market mutton	J.B Nayak (04-4781-2000)	Dr. M. N. Brahmbhatt	2004
8	Use of cytochrome b gene variability in detecting meat species by multiplex PCR	Jain Shally (04-5531-2002)	Dr. M. N. Brahmbhatt	2004
9	Prevalance of <i>Cryptococcus neoformans</i> in man, animal, and environment	Lini Thomas (04-5519-2002)	Dr. M. Pal	2004
10	Seroprevalence of brucellosis in cattle, buffalo and human being in central Gujarat	R. N. Varasda (04-4599-2000)	Dr. M. N. Brahmbhatt	2004
11	Prevalance of <i>Pseudomonas aeruginosa</i> in man, animal, and environment	Gobu B (04-5614-2003)	Dr. M. Pal	2005
12	<i>Staphylococcus aureus</i> in animal, man and environment	B.C.Parmar (04-5221-2001)	Dr. M. Pal	2005
13	Detection of verotoxin, cytolethal distending toxin and intimin gene by Real Time PCR and characterization of <i>Escherichia coli</i> isolated from Mutton	C.D. Bhong (04-5610-2003)	Dr. M. N. Brahmbhatt	2006
14	Isolation and characterization of <i>Listeria</i> spp. from poultry meat	Lohith Kumar (04-0436-2006)	Dr. M. N. Brahmbhatt	2009
15	Isolation and characterization of <i>Aeromonas</i> species from fish	ChaturYogesh A. (04-0602-2007)	Dr. M. N. Brahmbhatt	2009
16	Isolation and characterization of <i>Aeromonas</i> species from poultry meat	Smita (04-0648-2007)	Dr. M. N. Brahmbhatt	2009

17	Isolation, identification and characterization of <i>Aeromonas</i> species from market milk	DhandeManoj S. (04-0606-07)	Dr. M.N. Brahmbhatt	2010
18	Isolation, identification and characterization of <i>Listeria</i> species from market milk	Sonar SandipSudhakar (04-0843-08)	Dr. M.N. Brahmbhatt	2010
19	Isolation, identification and characterization of <i>Campylobacter</i> spp. from raw poultry meat by conventional and molecular method.	TaydeRavindraShivaji (04-0846-08)	Dr. M.N. Brahmbhatt	2010
20	Isolation, identification and molecular characterization of <i>Salmonella</i> isolates of poultry meat	MhatreSandeepu D. (04-0814-08)	Dr. C. V. Savalia	2010
21	Isolation, identification and molecular characterization of salmonella isolates from fish	Tekale Ashish Anantrao (04-0847-08)	Dr. C. V. Savalia	2010
22	Detection and virulence gene characterization of <i>Escherichia coli</i> (VTEC) from buffalo beef	Neha Sinha (04-1129-2009)	Dr. M.N. Brahmbhatt	2011
23	Isolation, identification and virulence genes characterization of <i>Salmonella</i> isolates from buffalo beef sample.	Swati Singh (04-1128-2009)	Dr. M.N. Brahmbhatt	2011
24	Isolation and characterization of <i>Vibrio</i> Spp. from Fish.	Kshirsagar Deepak Prakash (04-1090-2009)	Dr. M.N. Brahmbhatt	2011
25	Detection and molecular characterization of <i>Escherichia coli</i> from raw poultry meat.	Rathod Pratapsinh T. (04-1120-2009/12)	Dr. J. B. Nayak	2012
26	Isolation and characterization of <i>Staphylococcus aureus</i> from milk and milk products	Thaker Harsh Chetankumar (04-1442-2010)	Dr. M.N. Brahmbhatt	2012
27	Isolation and characterization of <i>Bacillus cereus</i> from milk and milk products	Tare Ashwini Bhupal (04-1440-2010)	Dr. M.N. Brahmbhatt	2012
28	Isolation, Identification and virulence genes characterization of <i>Salmonella</i> isolates from Eggs and Poultry house Environment	Fotariya Milind Harshadray (04-1695-2011)	Dr. M.N. Brahmbhatt	2013
29	Isolation, Identification and virulence genes characterization of <i>Escherichia coli</i> from Eggs and Poultry house Environment	BrijeshkumarDilipbhai Patel (04-1714-2011)	Dr. M.N. Brahmbhatt	2013

30	Detection and characterization of Escherichia coli from milk and milk products.	Virpari Pareshkumar Khen garbhai (04-1741-2014)	Dr. J. B. Nayak	2013
31	Prevalence, isolation and characterization of Campylobacter species from milk and milk products	Shivani Modi (04-1997-2012)	Dr. M.N. Brahmbhatt	2014
32	“Isolation, identification and detection of virulence factor associated genes of salmonella obtained from pork and slaughter house environment”	Chaudhary Jeetendrakumar H. (04-1967-2012)	Dr. J. B. Nayak	2014
33	“Isolation, identification and detection of virulence factor associated genes of salmonella obtained from chevon and mutton”	Makwana Pareshbhai Peth abhai. (04-1976-2012)	Dr. J. B. Nayak	2014
34	Isolation, identification and detection of Virulence factor associated genes of campylobacter spp. Obtained from pork and Slaughter house environment	Kaje Vinay Sanjay (04-2224-2013)	Dr. J. B. Nayak	2015
35	Isolation, identification and detection of virulence Factor associated genes of campylobacter spp. From Cattle	Desai Nikita Devidas (04-2222-2013)	Dr. J. B. Nayak	2015
36	Isolation, identification and detection of virulence Factor associated genes of campylobacter spp. From buffalo meat	Patel Swati N. (04-2236-2013)	Dr. M.N. Brahmbhatt	2015
37	Isolation and identification of staphylococcus aureus from poultry and poultry house environment with special reference to MRSA”	Kirit Bhedi (04-2458-2014)	Dr. J. B. Nayak	2016

Thesis Submitted: For Doctorate Degree (Ph. D)

Sr. No.	Title of Thesis	Name of student	Name of Guide	Year
1	Epidemiological studies on canine zoonotic helminths with particular references to Toxocaracanis	M.N. Brahmbhatt (04-3650-94)	Dr. M. Pal	1999
2	Studies on leptospirosis in animals and man in Gujarat	C. V. Savalia (04-3655-94)	Dr. M. Pal	2000
3	Isolation, identification and characterization of Listeria species from market meat	J. B. Nayak (04-0092-05)	Dr. M. N. Brahmbhatt	2009
4	Study on prevalence of tuberculosis in human and animal population with special reference to its zoonotic significance.	Parmar B.C. (04-0269-05)	Dr. M.N. Brahmbhatt	2010

5	Molecular Characterization, typing and antibiotic resistance pattern of Campylobacter spp. Isolated from Animal and Human sources	Yogesh A Chatur (04-1387-2014)	Dr. M.N. Brahmbhatt	2014
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D. Research Publications (No.)

National : 112

International : 54

E. Research Recommendations: Total = 4

III. Extension

A. Refresher Training Courses / Summer-Winter Schools conducted

- Training Courses are organized every year under Assistance to State for Control of Animal Diseases (ASCAD) by Government of India, held for the field veterinarians of Department of Animal Husbandry Gujarat State.

B. Seminar/Symposia/Conference/Workshop organized

- Department organized and hosted a National Symposium on “Horizons of Veterinary Public Health in Augmenting Veterinary, Medical and Environmental Health” & 6th Annual Conference of Indian Association of Veterinary Public Health Specialists (IAVPHS) during November 29th - 30th, 2007.
- One day workshop on “Biomedical waste management” was organized on 25 March, 2014.
- One documentary on “Adarsh Pashupalan” (Ideal Animal Husbandry) in Gujarati language was prepared as subject matter specialist and distributed to all the villages of Gujarat during Krushi Mahotsav-2012 and 2015.

C. Diagnostic Services

- The department has focused on isolation and characterization of bacterial food borne pathogens like Campylobacter spp., E. coli, Salmonella, Brucella, Mycobacterium bovis in food and clinical samples. Presently, molecular epidemiology of Campylobacter from animal and human sources is undertaken by characterizing isolates by MLST, PCR-RFLP (Fla-Typing), Protein profile and 16S rRNA sequencing.
- The PCR is being employed to detect the microorganism in food and clinical samples, confirm the bacterial strains by species specific PCR assays and to detect virulence genes in microorganisms. Multiplex PCR had been standardized to detect the Campylobacter jejuni and coli in meat samples.

D. Delivered/Exhibitions/Farmers' meet-day/Kisan Call Center/Field Visits

- Participation in Krishi Mahotsav and Krishimela every year
- Five Radio-TV talks were given.

E. Expert services to State Government/Co-op. dairies/Other agencies/NGOs

NIL

F. No. of Publications of Popular articles/Books/Booklets/Pamphlets/Leaflets/Souvenir/Compendium/ chapters/ Lab Manuals / Training Manualsetc.

- Popular articles : 18
- Books : 3
- Booklets : 2
- Folders : 3
- Chapters : 2
- Laboratory Manuals : 8
- Training Manuals : 2

G. Visitors

Dr. Winthrop Harewood from School of Veterinary Medicine, Trinidad, West Indies.

H. Any other items

- Dr. M. N. Brahmbhatt, Professor & Head working as a Registrar
- Dr. J. B. Nayak, Associate Professor working as a Technical Officer of the college

Achievements:

A. Awards/Honours/Recognitions/Appreciations

- Dr. M. N. Brahmbhatt has been awarded as “FELLOW” of Indian Association of Veterinary Public Health Specialists (IAVPHS) at the International symposium on “New strategies for prevention and control of zoonoses: An integrated veterinary and medical approach” and 5th Annual Conference of IAVPHS at Palampur (H.P.) during 12-14 October 2006.
- **Dr. J. B. Nayak** and Dr. M. N. Brahmbhatt received Best Ph.D thesis Award from the Gujarat Association for Agricultural Sciences (GAAS) by Honorable State Agricultural Minister Shri K. M. Bhalala on November 2011.
- “Dr. S.P. Singh Best Research Paper Award” for the research paper entitled “Effect of Cooking and Putrifaction on meat identification using cytochrome b gene variability by PCR. By Shally Jain, M.N. Brahmbhatt, D.N. Rank, C.G. Joshi, J.V. Solanki and C.D. Bhong. Published in Journal of Veterinary Public Health, Vol. 5 (1): 9-12, 2007 during International Symposium on “Food Safety, Quality Assurance & Global Trade: Concerns and Strategies” organized by College of Veterinary and Animal Science, Pantnagar, India in collaboration with College of Veterinary Medicine. Michigan State University, East Lansing, USA on 7th November 2008.
- Dr. V. N. Bachhil Young Scientist Award for the paper presentation titled “Quinolone resistance in Campylobacter isolates from man and animal sources and detection of mutation in topoisomerase genes” at National Symposium & 12th Annual Conference of IAVPHS 2014 at Khanapara, Guwahati .
- DR. J.B.Nayak, Associate Professor, has been awarded as the Best Teacher of year 2015 in Faculty of Veterinary Sc. & A.H., AAU, Anand.
- Dr.B.C.Parmar, Associate Professor has been awarded for the best paper award in 2015 from The Society for Veterinary Sciences and Biotechnology at 3rd Annual Meeting of Society of Veterinary Sciences and Biotechnology, held at RAJUVAS, Bikaner- 334001, Rajasthan, on 7-8 October, 2015.

B. Assignments as Subject Expert / Member (Selection Committee/Advisory Board)

Dr.M.N.Brahmbhatt and Dr.J.B.Nayak are nominated members for different selection committees as subject experts.

C. Advanced Instrumentation / Lab Facilities

As per the VCI requirement, Department of Veterinary Public Health having all facilities.

Buildings:

1. Office Building for staff
2. U. G. Laboratory with practical class room
3. P.G. Laboratory
4. Zoonoses Laboratory
5. Instrument room
6. Washing and Sterilization room

Instruments:

- BOD incubator
- Meat grinder
- Refrigerating Centrifuge
- Bone & Meat cutting machine
- Bacteriological Incubator
- Cooling incubator
- Hot Air Oven
- Water purifier system
- Electronic balance
- Double door refrigerator
- Single door refrigerator
- Autoclave
- Water jacketed CO₂ Incubator
- Laminar Flow
- Water bath with cooling attachment
- Chilled water circulator
- Mono pan Balance
- PCR Assembly (Two)

- UV Gel documentation system
- Vortex mixture
- Nanodrop Spectrophotometer
- ELISA Reader
- Horizontal Electrophoresis Unit
- Vertical Electrophoresis Unit

D. Patents filed / Technology Developed

- DNA sequencing: In total, 82 partial gene sequence has been submitted in NCBI nucleotide database.
- PCR-RFLP has been standardized to type campylobacter isolates obtained from human and animal sources by fla method using Ddel restriction enzyme which revealed different flaA profiles.
- Multilocus sequence typing: The Campylobacter spp. isolates isolated from animal and human sources have being typed by multilocus sequence typing method.

NSS Camps/KrishiMahotsav/ PashupalanShibirs/Radio-TV Talks

E. Other Recognitions (SRC/NSS/AGRESCO Convener/Hostel Rector etc.)

Future Thrust Areas:

1. Seroprevalance of brucellosis in small ruminants & Humans of Anand district
2. Detection of tetracycline antibiotic residue in milk of Anand District

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