Format for Dept Information for AAU Web Site for Up Grading: June 2016

Department of Veterinary Parasitology
Veterinary College, AAU, Anand

Profile (In Brief):

Department of Veterinary Parasitology is actively engaged in both Under-Graduate and Post-Graduate Teaching, Research and Extension activities from its inception in 1965.

In the five year degree programme as per VCI, the subject of Veterinary Parasitology is divided into (1) VPA-211(3+1): General Veterinary Parasitology and Helminthology(Semester lll) ; (2) VPA-221(1+1): Veterinary Entomology and Acarology (Semester lV); (3) VPA-222(2+1): Veterinary Protozoology(Semester lV). A practical course VLD 411 (0+1) Semester VII : Veterinary Clinical Biochemistry and Laboratory Diagnosis-I is taught in association with Biochemistry and Biotechnology and Pathology as per New VCI pattern. Efforts have been made to make the course more practical oriented and of diagnostic utility.

The department is recognized to teach both at M.V.Sc. and Ph.D. at Post Graduate level. Till the date **29** scholars have obtained their Master's degree and **7** have obtained Ph.D degree.

A scheme entitled 'Scheme for the control of parasitic infestation in livestock especially in liverfluke and nasal granuloma' was attached with the department from 1965. Under the scheme survey of parasitic disease in livestock was carried out with particular reference to incidences of

Liverfluke and Schistosomiasis. In addition to these studies on the tick fauna of livestock was also undertaken in detail especially on bionomics and control of some important species. The scheme was renamed as “Central Disease Research Station (Parasitic Control)” from 1972.

Faculties:

Sr. No.	Name with photograph	Designation	Phone (O)	Cell No	Inter Com No.	E-Mail
1	Dr.J.J.Hasnani 	Professor & Head	02692-225913	9099565295	913	jhasnani@aau.in
2	Dr.P.V.Patel 	Professor	02692-225914	9825239373	914	prem@aau.in
3	Dr.N.D.Hirani 	Associate Professor	02692-225927	9408789575	927	hirani@aau.in
4	Dr. V. D. Chauhan 	Assistant Professor	-02692-225927	9737256780	-	drvandip@aau.in

Major Activities:

I. Teaching

A. UG Courses (Old Courses)

(1) VPA-211(3+1):General Veterinary Parasitology and Helminthology(Semester III)

(2) VPA-221(1+1): Veterinary Entomology and Acarology (Semester IV)

(3) VPA-222(2+1): Veterinary Protozoology(Semester IV).

(4) VLD 411 (0+1) Semester VII : Veterinary Clinical Biochemistry and Laboratory Diagnosis-I is taught in association with Biochemistry and Biotechnology and Pathology as per New VCI pattern: In third professional year

Subject: Veterinary Parasitology (Credits 3+2=5)

B. PG Courses

CODE	COURSE TITLE	CREDITS
	M.V.Sc.	
VPA 601	VETERINARY HELMINTHOLOGY-I	2+1
VPA 602	VETERINARY HELMINTHOLOGY-II	2+1
VPA 603	VETERINARY ENTOMOLOGY AND ACAROLOGY	2+1
VPA 604	VETERINARY PROTOZOOLOGY	2+1
VPA 605	PARASITOLOGICAL TECHNIQUES	0+2
VPA 606	CLINICAL PARASITOLOGY	1+1
VPA 607	TRENDS IN CONTROL OF LIVESTOCK AND POULTRY PARASITES	1+1
VPA 608	IMMUNOPARASITOLOGY	2+1
VPA 609	PARASITIC ZOONOSES	2+0
VPA 610	PARASITES OF ZOO AND WILD ANIMALS	2+1
VPA 611	MALACOLOGY	1+1
VPA 691	MASTER'S SEMINAR	1+0
VPA 699	MASTER'S RESEARCH	20
	Ph.D.	
VPA 701	APPLICATIONS OF REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEM IN	1+2
VPA 702	MOLECULAR DIAGNOSTICS AND VACCINE DEVELOPMENT IN	2+1
VPA 703	HOST PARASITE INTERACTIONS	2+0
VPA 704	ADVANCES IN PROTOZOOLOGY	2+1
VPA 705	ADVANCES IN HELMINTHOLOGY-I	2+1
VPA 706	ADVANCES IN HELMINTHOLOGY-II	2+1

VPA 707	ADVANCES IN ENTOMOLOGY AND ACAROLOGY	2+1
VPA 708	IN VITRO CULTIVATION OF PARASITES	1+2
VPA 709	EMERGING AND RE-EMERGING PARASITIC	2+0
VPA 710	BIONOMICS OF PARASITES	3+0
VPA 711	ENVIRONMENTAL PARASITOLOGY	1+1
VPA 790	SPECIAL PROBLEM	0+2
VPA 791	DOCTORAL SEMINAR I	1+0
VPA 792	DOCTORAL SEMINAR II	1+0
VPA 799	DOCTORAL RESEARCH	45

II. Research

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

NIL

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

- Central Disease Research Station (C.D.R.S.-Parasitic Control), C.D.R.S.- B.H. 5301
- **Objectives :**
    - To know the important parasitic diseases prevalent in the State and to find out suitable control measures.
    - To provide diagnostic services to Field Veterinarians, Livestock Owners, Organized and Private farms, etc.
    - To assess various chemotherapeutic drugs against common parasitic diseases of livestock.
- **Scheme** – Plan/ Non- plan/ ICAR/DBT/GOG/GOI/Other Agencies etc.: **Non - Plan Scheme.**
- **Details of Budget** i.e. B.H. No. ,Grant Sanctioned and Expense:C.D.R.S. – B.H.5301
- **Sanction No. & Date** : 1st August, 1964, Continuous Non-Plan Scheme.
- **Staff Position:**
    - Sanctioned:
    - Veterinary Officer/Senior Research Assistant
    - Laboratory Technician
    - Helpers

  Filled/Vacant:

- Veterinary Officer/Senior Research Assistant : NIL
- Laboratory Technician : NIL
- Helpers : NIL
- RF/TA/RA etc : NIL

➢ Name and Designation of Officer Incharge

- Dr.J.J.Hasnani (P.I)
  Professor & Head
- Dr.P.V.Patel (Co. P.I)
  Professor
- Dr.N.D.Hirani (Co. P.I)
  Associate Proffesor
- Dr.V.D. Chauhan(Co. P.I)
  Assistant Proffesor

The following areas of research has been completed ; keeping in view the prevalence of parasitic fauna in Gujarat State.

1. Survey of incidence of helminths in Cattle , Buffaloes, Sheep and Goat in Gujarat.
2. “Hump sore” in cattle in Bhavnagar area.
3. Anaplasmosis in buffaloes in Kaira District.
4. Studies on incidence and control of parasitic diseases in cattle in Gaushalas of Gujarat.
5. Incidence of Fascioliasis amongst Sheep and Goats in the farm animals and migrating animals
6. Treatment of Surra with Berenil.
7. Survey of ticks of domestic animals of Gujarat State with study of Bionomics of some of its common species.
8. Study on skin nodular complex in calves.
9. Study on parasitic diseases of poultry.
10. On the Incidence of Coccidiosis in buffalo- calves in Gujarat.
11. Incidence of Babesiosis and Theileriosis in crossbred cattle.
12. Parasitic gastro-enteritis in cattle and buffaloes.
13. Incidence of nasal **Schistosomiasis** in goats.
14. Incidence of mange in buffaloes.
15. Record of ***Hematomyxus elephantis*** in an Indian elephant.
16. Record of ***Paragonimus westermanii*** from a clouded leopard in India.
17. Incidence of ***Spirometra mansoni*** from a dog.
18. Incidence of microfilaria in horses.

19. Incidence of ***Opisthiorchis sinensis*** in cat.
20. Sarcocystis infection in Cattle, buffaloes, sheep and goat.
21. Infection of cross-bred animals with ***Theileria annulata*** through infected ***Hyaloma anatolicum anatolicum***.
22. Incidence of ***Entamoeba bovis*** infection in cattle.
23. Evaluation of common diagnostic procedures in experimental ***Trypanosoma evansi*** infection in buffalo- calves.
24. Experimental infection of common species of snails with the miracidium of ***G.explanatum.***
25. Breeding habits of ***Hyalomma anatolicum anatolicum.***
26. Epidemiology and ecology of Haemonochosis in sheep and goats.
27. Trials to test the efficacy of certain chemotherapeutic agents against different parasitic infections in sheep.
28. Certain immunodiagnostic tests for the detection of hepatic amphistomiasis.
29. Coccidial infection in buffalo calves of Livestock Research Station, Navsari.
30. Vaccine trials using parent stock vaccine viz, CoxAbic against *Eimeria spp.* in collaboration with Dept. of Pathology,
31. Studies on poultry parasites of Anand District.
32. Comparative efficacy of coccidiostats on coccidial prevalence and body weight of chicks and growers.
33. Studies on parasites of Goat in Anand District.
34. Transcriptome analysis of *Paramphistomum cervi* of Water Buffalo(*Bubalus bubalis*) using next generation sequencing.
35. Transcriptome analysis of *Paramphistomum cervi* in Goat (*Capra hircus*) using next generation sequencing.
36. Transcriptome analysis of *Paramphistomum cervi* in Sheep (*Ovis aries*) using next generation sequencing.
37. Diagnosis of Tropical Theileriosis in cattle and buffaloes using advanced molecular tools.
38. Comparative efficacy of coccidiostats on experimentally induced ***Eimeria tenella*** infection along with effects on growth, haemoto-biochemistry and pathology in broilers.
39. Abattoir studies on Amphistomosis of buffaloes.
40. Abattoir studies on Fasciolosis of buffaloes.
41. Studies on Prevalence, Haemato – Biochemical and Histopathological Aspects of Fasciolosis in Slaughtered Buffaloes.
42. Studies on Prevalence, Haemato – Biochemical and Histopathological Aspects of Amphistomosis in Slaughtered Buffaloes.
43. Studies on Clinico-Biochemical aspects of Ancylostomosis in Dogs

44. *Studies on prevalence, haemato-biochemical alterations and diagnostic aspects of *Trypanosomaevansi* using blood smear examination and polymerase chain reaction (PCR) in cattle and buffaloes.
45. *Studies on helminthic infection in equines

*Research work is in progress.

The department has also undertaken trials with various drugs:

1. Nilverm (Tetramisole) against nematodes in sheep.
2. Samorin (Isometamedium chloride) against Trypanosomiasis in buffaloes and donkeys.
3. Berenil (Diminazene aceturate) against Babesiosis and Typanosomiasis in cattle and buffaloes.
4. Pauryl (Carbryl 5% wettable powder) against ectoparasites in cattle and dogs.
5. Panacur (Fenbendazole) against nematodes in sheep.
6. Metronidazole against ***Entamoeba bovis*** in cattle.
7. Comparative study of SRC 4402 and Niclosamide against cestodiasis in Poulrty and Sheep.
8. Malathion against ***Hyalomma anatolicum anatolicum*** and ***Haemaphysalis bispinosa*** infestation in buffaloes.
9. Butox (Deltamethrine 12.5 gram per litter) against cattle tick ***Boophilus microplus*** *and* ***Hyalomma anatolicum anatolicum.***
10. Ivermectin (Ivomac-MSD) against **Sacroptic mange** and nematodes in camel.
11. Ivermectin against lice infestation in goats.
12. Ivermectin against **Sarcoptic mange** in goats.
13. Fasinex (Triclabendazole) against fascioliasis in buffaloes and cattle.
14. Efficacy trial of ESb3 (30% Sulfaclozine sodium salt monohydrate) against *Eimeria necatrix* in experimentally infected broiler chicks
15. Efficacy trial of ESb3 (30% Sulfaclozine sodium salt monohydrate) against *Eimeria tenella* in experimentally infected broiler chicks
16. Clinical trial with Banminth Forte (Morantel citrate) against Gastrointestinal nematodiasis in Sheep and Goats.
17. Testing of the drug Banminth Forte (Morantel citrate) against Gastrointestinal nematodes in naturally infected cattle.
18. Field trial of Distodin (Oxyclozanide) against *Fasciola gigantica* infestation in cattle and buffaloes.

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

Sr. no	Name of Candidate	Degree	Title of Research Work (Thesis)
M.Sc/M.V.Sc			
1	B. L. Avsatthi	M.Sc	Bionomics of Hyalomma anatolicum anatolicum,Koch,1844. a common tick of cattle in Gujarat State.
2	D. K. Pethkar	M.Sc	Studies on Mecistocirrus digitatus, a common nematode of cattle in Gujarat State
3	K.S.Rao	M.Sc	Studies on ticks of Sagar district of Mysore State.
4	R. B. Prajapati	M.V.Sc	Studies on Psoroptic mange, mites of buffaloes in Kaira District Of Gujarat State
5	P. C. Patnaik	M.V.Sc	Bionomics of Ornithodorus savignii with a note on some ticks of Orissa
6	B. V. Upadhyay	M.Sc	Studies on internal anatomy of Hyaloma merginatum issaci.
7	S. V. Pachlag	M.V.Sc	Bionomics of most common nematodes of sheep
8	C.R. Tandel	M.Sc	Bionomics of Hippoboscid flies of Livestock in Gujarat State
9	D.D. Nagpal	M.V.Sc	Immunodiagnosis of Trypanosomiasis in Livestock.
10	K. N. Raval	M.Sc	Studies on Myasis producing flies in Gujarat State
11	L.G. Kathiria	M.V.Sc	Evaluation of some common diagnostic procedures in experimental Trypanosoma evansi infection in buffalo calves
12	R.R Momin	M.V.Sc	Studies on Gastro-intestinal nematodiasis in Sheep under farm and field condition in Palanpur District of North Gujarat
13	J.J. Hasnani	M.V.Sc	Helminthic infestation in domestic ruminants in Gujarat State
14	M.H. Kikani	M.V.Sc	Studies on ectoparasites of Buffaloes (Bubalus bubalis) in Junagadh and Kaira Districts of Gujarat State
15	P.V. Patel	M.V.Sc	Internal parasites of Goats and Sheep with particular reference to hematological and biochemical studies.
16	A.S. Nayee	M.V.Sc	Studies on hematological values, skin lesions and total protein profile in Camels naturally infected with Sarcoptes scabiei and nematodes before and after treatment with Ivermactin.
17	D.G. Sthanki	M.V.Sc	Study on the Schistosoma nasale infestation in cattle with particular reference to Histopathological, biochemical and haematological aspects
18	J.B.Solanki	M.V.Sc	Clinico-biochemical aspects of Canine Demodecosis
19	N.D.Hirani	M.V.Sc	Studies on Prevalence, Haematology, Biochemical and Histopathological changes in Fowl Coccidiosis
20	H. C. Patel	M.V.Sc	A study on Helminth Parasites of buffaloes brought to Ahmedabad slaughter house

21	Yogesh Kumar Gupta	M.V.Sc	Studies on Gastro-intestinal parasites of poultry in Anand district
22	Subhash Sharma	M.V.Sc	Studies on prevalence, clinico-biochemical and histopathological aspects of helminth parasites of Goats in Anand District.
23	Sweta Garg	M.V.Sc	Transcriptome analysis of Paramphistomum cervi in Goat (Capra hircus) using next generation sequencing
24	Vijayata	M.V.Sc	Transcriptome analysis of Paramphistomum cervi in Sheep (Ovis aries) using next generation sequencing
25	Reetika Chourasia	M.V. Sc	Transcriptome analysis of Paramphistomum cervi of Water Buffalo(Bubalus bubalis) using next generation sequencing
26	V. R. Kundave	M.V.Sc	Diagnosis of Tropical Theileriosis in Cattle and Buffaloes using Advanced Molecular Tools
27	S. S. Pandya	M.V.Sc.	Studies on Prevalence, Haemato – Biochemical and Histopathological Aspects of Fasciolosis in Slaughtered Buffaloes.
28	V.D. Chauhan	M.V.Sc.	Studies on Prevalence, Haemato – Biochemical and Histopathological Aspects of Amphistomosis in Slaughtered Buffaloes.
29	Brahmbhatt N.N.	M.V.Sc.	Studies On Clinico-Biochemical Aspects of Ancylostomosis In Dogs
30	Prakriti Singh	M.V.Sc	Studies on helminthic infection in horse (*Equus caballus*)
Ph.D			
1	V.O.Shah	Ph.D.	Effect of Physical and Chemical agents on the Ionic concentration, cuticular secretion and rate of mortality in the different stages of tick Hyaloma anatolicum anatolicum, Koch, 1844
2	A.I. Patel	Ph.D.	Ectoparasites of Camel (Camelus dromedarius) with particular reference to tick fauna
3	J.J.Hasnani	Ph.D.	Comparative studies on the Immunological, Histopathological, Histochemical and Biochemical aspects of Fasciola gigantica and Gigantocotyle explanatum infestation in buffaloes.
4	P.V.Patel	Ph.D.	Parasitic fauna of wild animals in Gujarat State.
5	G.C.Puttalakshmamma	Ph.D.	Morphology, Pathology and Molecular characterization of Adults and Free living developmental stages of Amphistomes of water buffalo(Bubalus bubalis)
6	J.B.Solanki	Ph.D.	Epidemiological, Haematobiochemical and Histopathological aspects of Helminth parasites of Camels.

7	N.D.Hirani	Ph.D.	Comparative Efficacy of Coccidiostats on Experimentally Induced Eimeria tenella Infection Along with Effects on Growth, Haemato - Biochemistry and Pathology in Broilers
8	Suchitkumar Sharadkumar Pandya	Ph.D.	Studies on prevalence, haemato-biochemical alterations and diagnostic aspects of Trypanosoma evansi using advanced molecular tool and blood smear examination in cattle and buffaloes

D. Research Publications (No.) : (After 2010)

National : 40

International : 21

E. Research Recommendations: Total = 5 (Five)

❖ Recommendation for Scientific Community : 5 (Four)

- ❖ In House designed primer
  F-5' AGCCGAGCTGAATGAGAAACA3'
  R-5' AACCCCACCGAACATATACAC3'
  can be used for specific detection of *Gastrothylax indicus* by PCR.
- ❖ It is advisable to have prophylactic deworming during pre-monsoon and post-winter seasons for Nematodes (*Trichostrongylus* spp.; *Trichuris* spp.) and Cestode (*Moniezia* spp.) infections in Goats of Anand District.
- ❖ It is advisable to have prophylactic antitrematodal treatment during pre-winter and pre-monsoon seasons for *Paramphistomum cervi, Cotylophoron cotylophorum* and *Gigantocotyle explanatum* infections in buffaloes of Anand and Ahmedabad districts.
- ❖ It is advisable to have prophylactic flukicidal treatment during pre-winter and pre-monsoon seasons for *Fasciola gigantica* infection in buffaloes of Anand and Ahmedabad districts.
- ❖ Polymerase chain reaction based diagnosis of Trypanosoma evansi is more effective than routine blood smear examination which has showed 30.23% sensitivity in relation to PCR in cattle and buffaloes.

❖ Recommendation for Farmers' Community : 1 (One)

1) Recommendation (Approved) (for pet dog keepers)

"The prevalence of Ancylostomosis (14-37%) has been observed round the year in pet dogs of Anand district, hence the pet owners are advised to follow the prescribed deworming schedule".

પાળતું કૂતરાના માલિકોને ભલામણ

“આણંદ જિલ્લામાં કૂતરાં પાળતાં માલિકોને ભલામણ કરવામાં આવે છે કે તેઓએ વર્ષપર્યંત (૧૪-૩૭%) જોવા મળેલ અંકુશકૃમિ (એંકાયલોસ્ટોમોસિસ)ના રોગના અટકાવ માટે નિયત કૃમિનાશક દવા, નિર્ધારિત સમયાંતરે આપવી જોઇએ”

III. Extension

A. Refresher Training Courses / Summer-Winter Schools conducted

1. Ascad Training Programme on ‘Laboratory Techniques in Disease Diagnosis’ 19-24 December, 2011.
2. Ascad Training Programme on ‘Laboratory Techniques in Disease Diagnosis’18-23 Feb.,2013 .
3. Ascad Training Programme on ‘Laboratory Techniques in Disease Diagnosis ’07 – 12 Oct.,2013.
4. Ascad training on “Lab Techniques for disease diagnosis in Pre-clinical subjects, ELISA, PCR & other advanced diagnostic techniques, biological tests, Sample collection during 21-09-15 to 26-09-15.

B. Seminar/Symposia/Conference/Workshop organized

1. Seminar on Ethics and alternatives for animal use in research on 27th February, 2014, organized by Department of Veterinary Parasitology at College of Veterinary Science and A. H. , AAU, Anand

C. Diagnostic Services / Clinical Camps/Farmers’ advisory

- Faecal samples/Blood Smears/Skin Scrappings /P.M. Materials/ Gross Specimens and other samples (viz. nasal discharge, urine samples etc.) received in the Department were processed and examined as per the Standard Procedures. In addition to this the Department provides diagnostic services to the Farmers, Animal Owners, Field Veterinarians and Other Agencies.

D. services/Ambulatory Clinics/Vaccination camps

NIL

E. NSS Camps/ Krishi Mahotsav/ Pashupalan Shibirs/Radio-TV Talks Delivered/Exhibitions/Farmers’ meet-day/Kisan Call Center/Field Visits

Participation in Krishi Mahotsav, Krishimela Mega Event, Krishi Mela Exhibition, Pashupalan Shibir etc.

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

1. Worked as a member in State Govt. of Gujarat Project-RKVY entitled as “Intensive Deworming and Ecto parasites Control Campaign Scheme”

(Order of Director of Animal Husbandry No.: આ.સં./આ-૨/RKVY/૧૪૯૯-૧૫૦૩/૧૪. તારીખ: ૦૪/૦૬/૧૪.

2. Worked as an Expert in Committee formed by Veterinary College, AAU, Anand for giving suggestions/guidelines to AMUL regarding Guidelines for Designing Antibiotic Policy for Dairy Animals. (Order No.: KDU/AH/Antibiotics/II:11264, Dated 31/07/14.

G. No. of Publications of Popular articles /Books /Booklets /Pamphlets /Leaflets/ Souvenir/Compendium/ chapters/ Lab Manuals / Training Manuals **etc. :**

- **Popular articles : 10**
- **Books : 4**
- **Booklets : 3**
- **Folders : 5**
- **Chapters : 2**
- **Laboratory Manuals : 7**
- **Training Manuals : 4**

H. Visitors

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

- various categories of visitors are explained regarding important parasitic diseases with their control measures.

I. Any other items

- Professor In charge P.G. Seminar
- Professor In charge Ashwini Seminar Hall
- Member of I.A.E.C.

- Convener Press Committee U.G.
- Member of Board of Studies and faculty
- Professor In charge Placement Cell
- Member in Poultry Health Committee
- Assistant to UGTC in academic activities

Achievements:

A. Awards/Honours/Recognitions/Appreciations

Professor J.P.Trivedi Award Sponsored by Shri Hari Om Ashram, Nadiad for the year-2005

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

Worked as a Member of Selection Committee of Professor/Associate Professor

C. Advanced Instrumentation / Lab Facilities

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

D. Patents filed / Technology Developed: NIL

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

Sr. No	Particulars	Place where you have worked	No. of years
i.	Rector/Assistant rector	Assistant rector	10-9-93 to 17-7-95
		Member Secretary of IAEC of Vety. College. Anand. Member of IAEC of Vety. College. Anand.	02-08-2007 to18-3-2010 14/10/15 to till today 5-9-2008 to till today

		Prof.I/C P.G. Seminar Vety. College. Anand. Prof. I/C Seminar Hall. Convener Res. Sub. Committee-Animal Health:	24/02/09 to till today 31/05/10- 7/9/2012

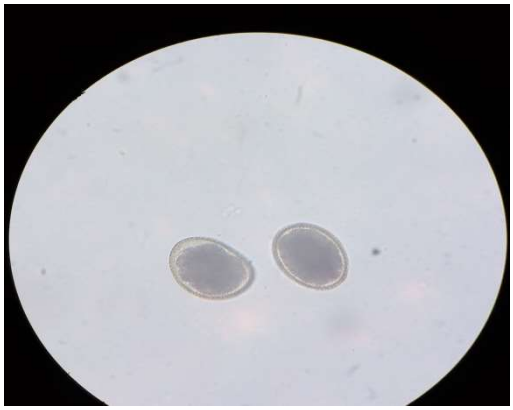
Future Thrust Areas:

1. Studies on prevalence, haemato-biochemical alterations and diagnostic aspects of *Trypanosomaevansi* using blood smear examination and polymerase chain reaction (PCR) in cattle and buffaloes.
2. *Studies on helminthic infection in equines.

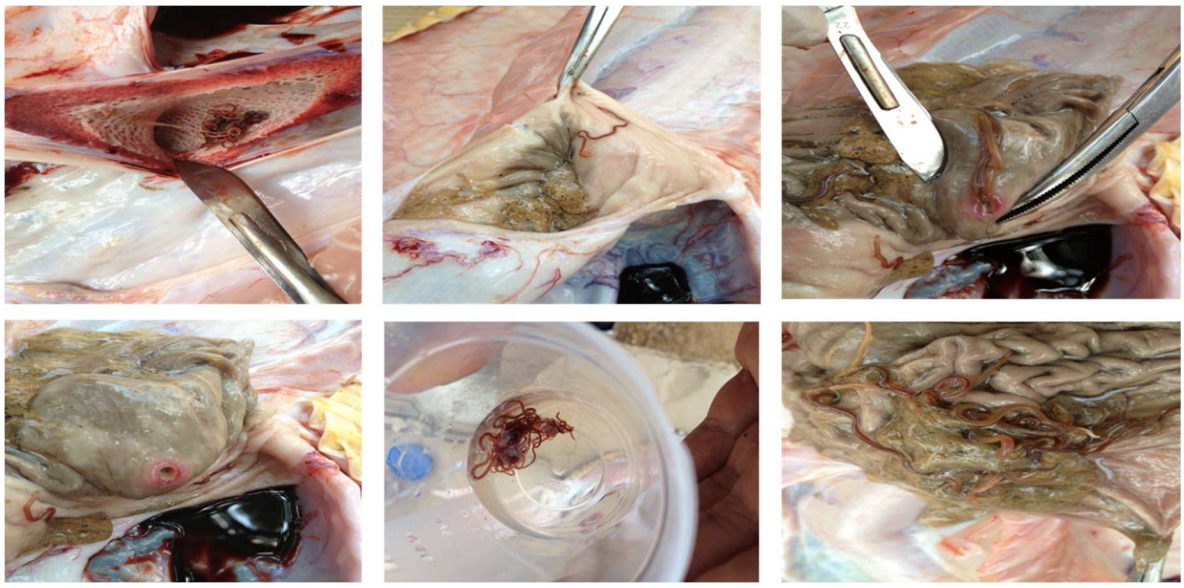
Glimpses of the Diagnostic/ Research photographs of some of the Parasites :

Larva of *Hypoderma spp.*

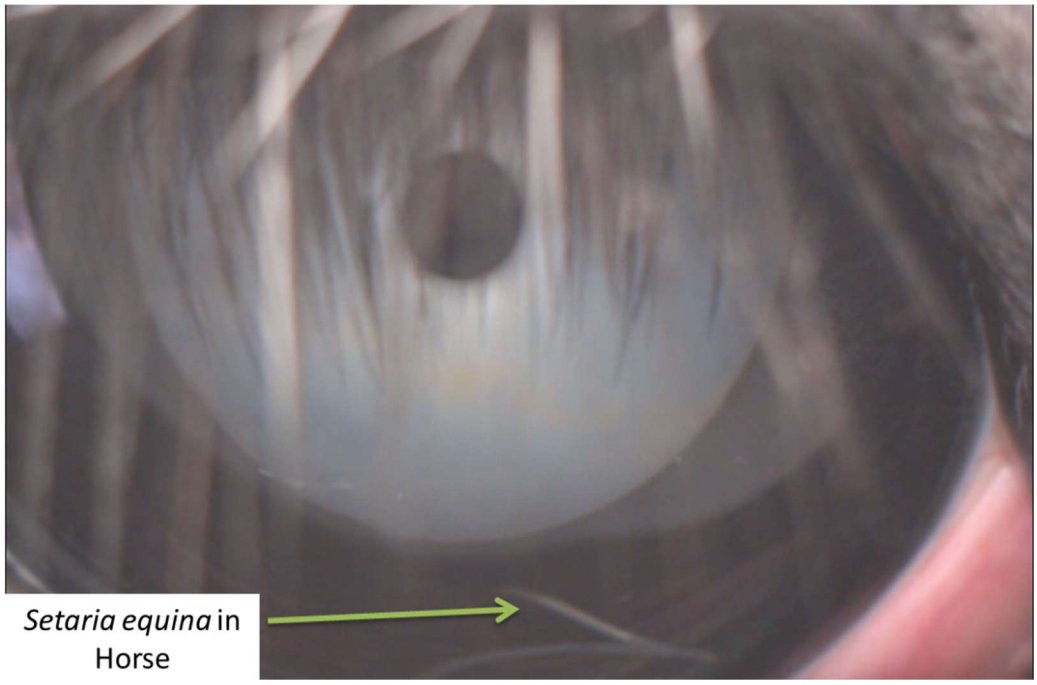
Cuclotogaster (Lipeurus) heterographus from Painted Stork



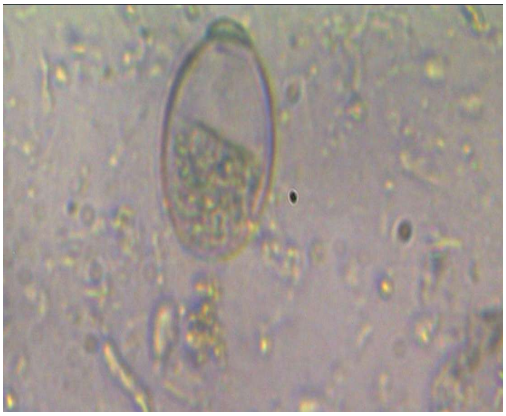
Ova of *Ophidascaris spp.* from Python



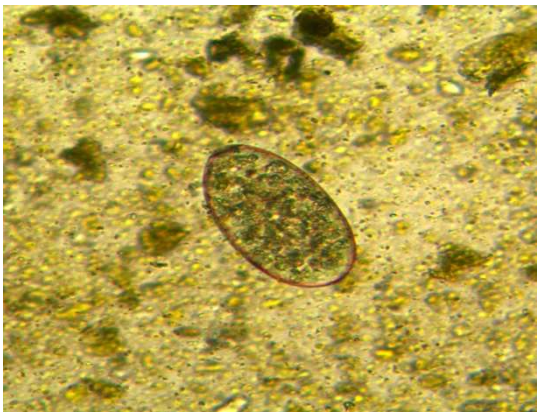
Ophidascaris spp. from Python



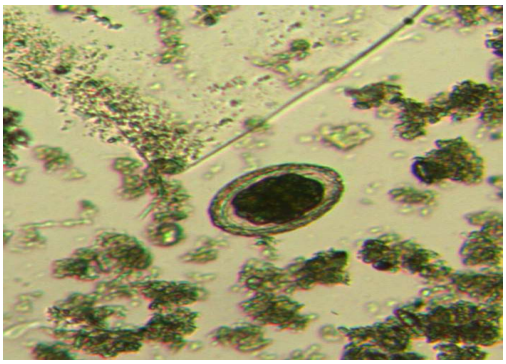
Setaria equina in Horse



Oocyst of Coccidia



Ova of Amphistomes

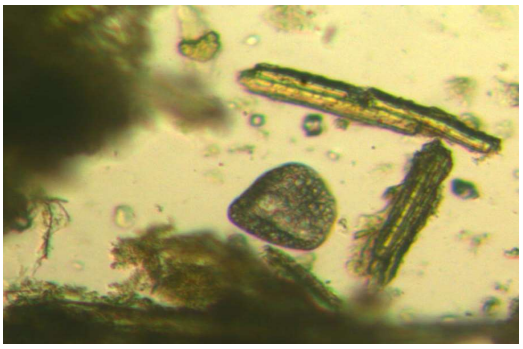


Ova of *Ascaridia spp.* in Pelican

Psoroptes spp.

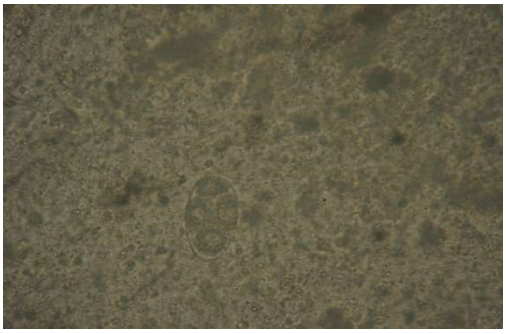
Larva of *Trichostrongylus spp.*

Ova of Mite showing Larval stage

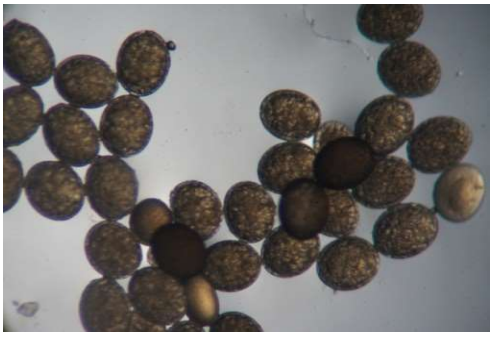


Ova of *Moniezia spp.*

Ova of *Trichuris spp.*

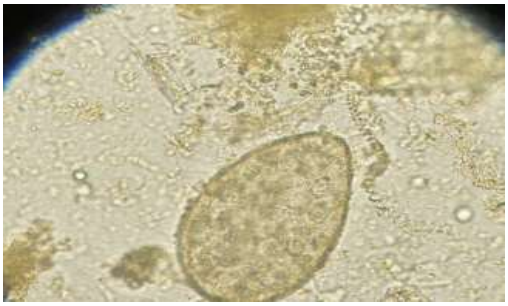


Ova of *Ancylostoma spp.*

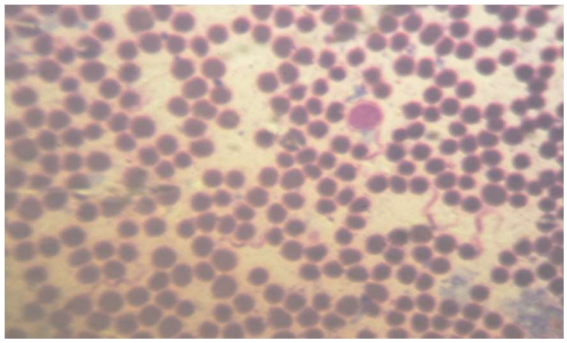


Eggs of Hard Ticks

Ova of *Parascaris spp.*

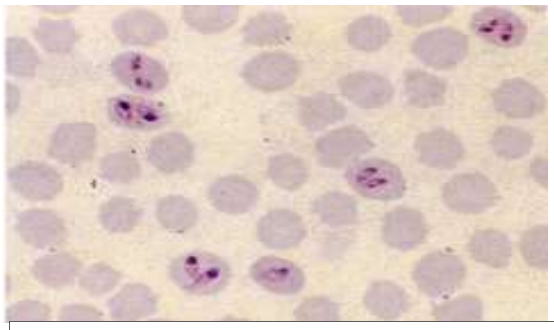


Ova of *Strongylus spp.*

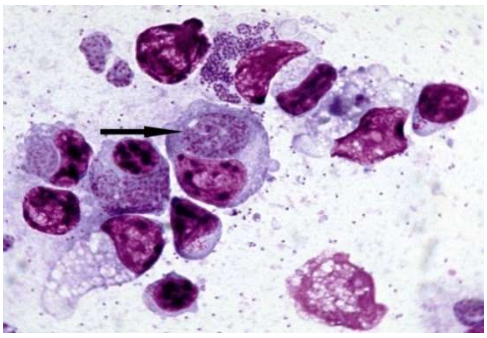


Trypanosoma spp.

Anaplasma spp. in Goat



B.bigemina- Pyriform to ovoid bodies



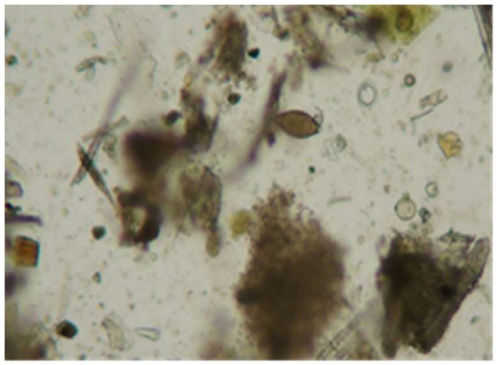
Koch's Blue Bodies in Cytoplasm of Lymphocyte/s

***Gigantocotyle explanatum* (Buffalo)**

Ruminal amphistomes

Gross specimen of *Fasciola gigantica*

Proglottid of *Moniezia* spp.



Ova of *Trichuris* spp.

Trichostrongylus spp.

Paramphistomum cervi **(Rumen)**

Paramphistomum cervi

Fasciola gigantica **(Buffalo)**

Moniezia spp. **(Goat)**

Ascaridia galli **(Poultry)**

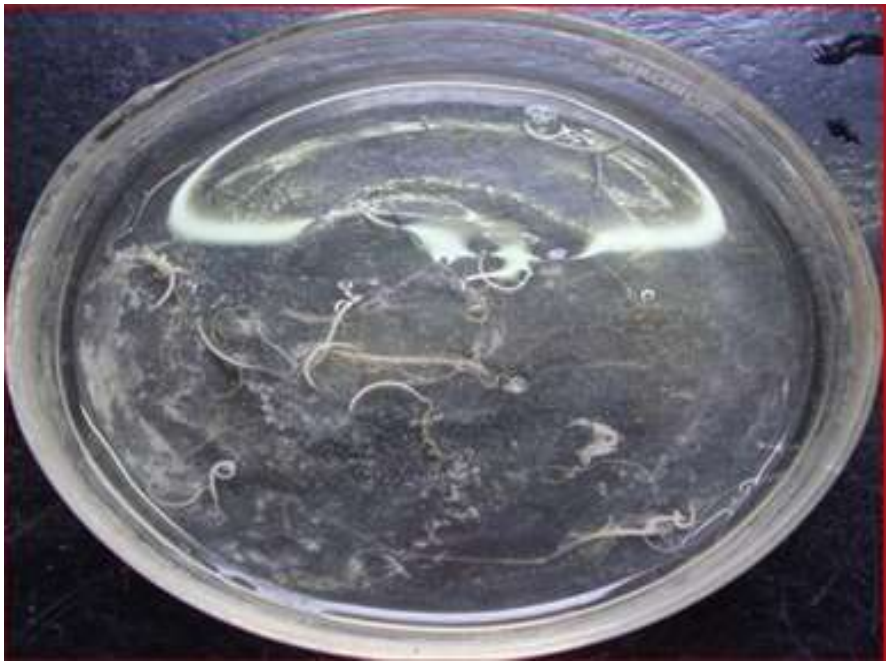
Parascaris equorum **(Horse)**

Heterakis gallinarum **in caeca**

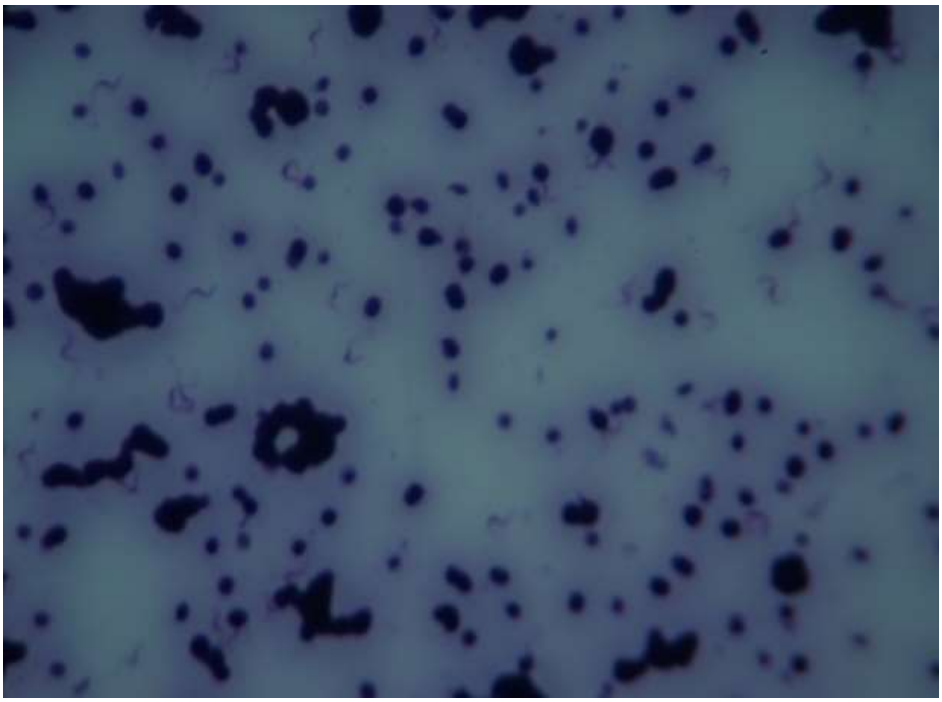
Heterakis gallinarum **(Poultry)**

Dermanyssus gallinae **(Poultry)**

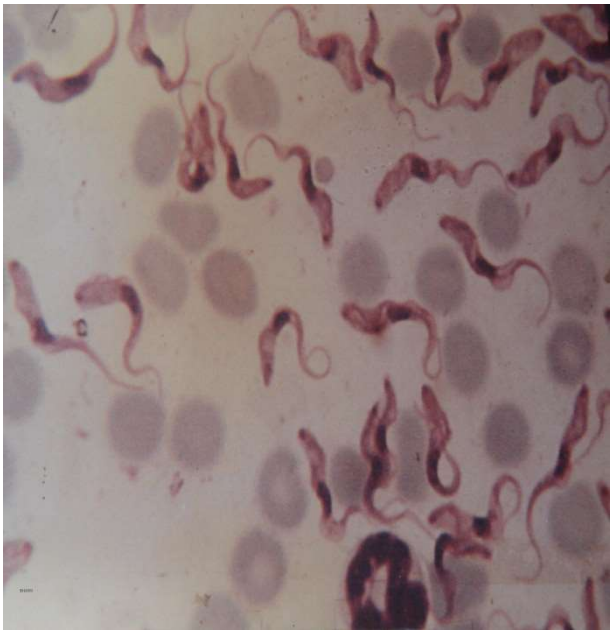
Argas persicus **(Poultry)**



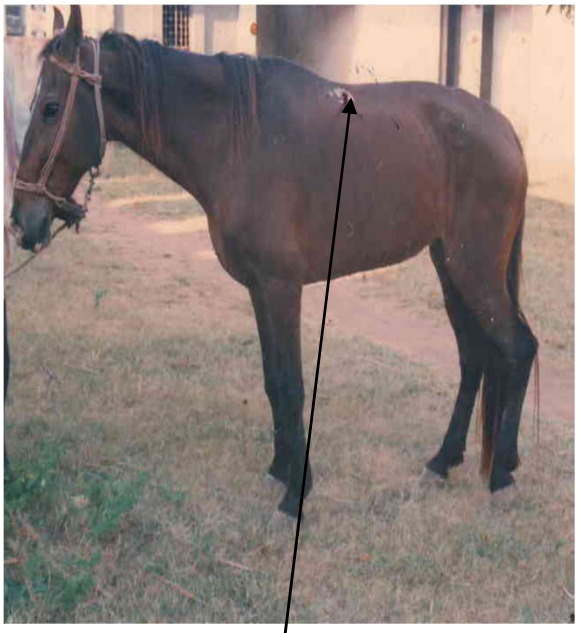
Trichuris spp. **(Goat)**



Trypanosoma spp.



Trypanosoma spp.

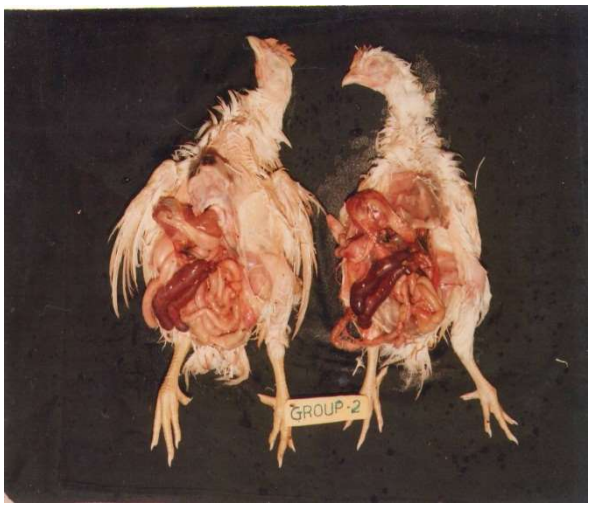


'Surra' in Horse

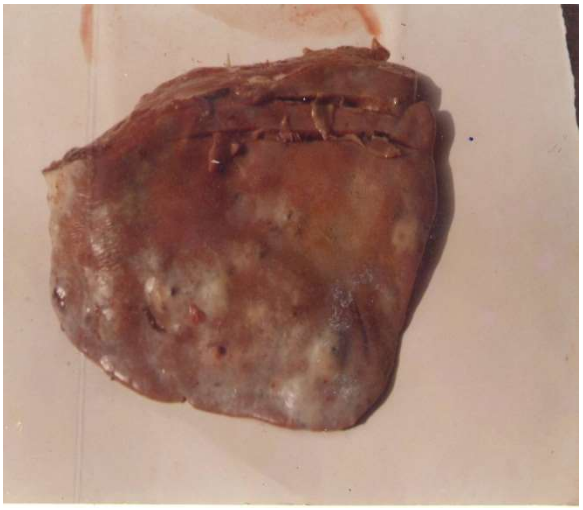
***Ascaris lumbricoides* in child**

***Ascaris lumbricoides* in child**

Parascaris equorum



Coccidiosis in Poultry



Fasciolosis in liver of buffalo

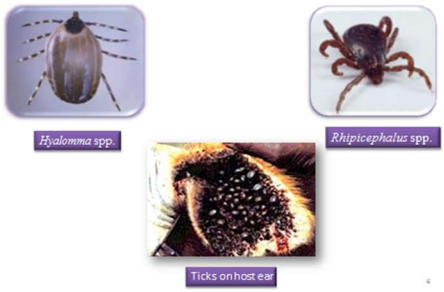
Tick infestation in host

Sarcoptes scabiei infestation in camel

Theileria annulata

POLYMERASE CHAIN REACTION

Theileria spp.



Dept. of Veterinary Parasitology

College of Veterinary Science and Animal Husbandry

Anand Agricultural University

Anand-388001

-X-X-X-