"Dissemination of Education for Knowledge Science & Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur

(An Empowered Autonomous Institute)

Department of Zoology

B. Sc. III, Sem. VI
STUDENTS SEMINAR
(20/01/25 - 21/01/2025)

VIVEKANAND COLLEGE KOLHAPUR (Empowered Autonomous) ESTD JUNE 1964

Academic Year: 2024-2025

"Dissemination of Education for Knowledge Science & Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur

(An Empowered Autonomous Institute)

Department of Zoology

Academic Year 2024-25

INDEX

STUDENTS SEMINAR

Dr. G. K. Sontakke
HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe
Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic year-2024-2025

B. Sc. III **Date: 26/11/2024**

Student Seminar

NOTICE

All students of B. Sc. III here by informed that, as per part of curriculum and CIE, all have to complete their seminars for paper **Immunology I** and **Immunology II**. It is compulsory to deliver seminar with PowerPoint (PPT). Schedule of seminar is given below, follow the schedule, prepare the PPT for allotted topic and complete your seminar. Submit Abstract and PPT before one day of seminar to the Zoology Department.

Dr. G. K. Sontakke

HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe
Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic year-2024-2025

Date: 26/11/2024

List of B. Sc. III student and Seminar Topic- Immunology I and Immunology II

Sr. No.	Roll No.	Seminar Topic	Topic of Seminar	Date	Signature
1	8341	Abrange Vaishnavi Vinod	Innate immunity-physical and physiological barrier	20/01/2025	
2	8342	Chougule Shraddha Shivaji	Innate immunity -Cellular and Cytokine barrier	20/01/2025	
3	8343	Dindayal Prabodhini Raju	adaptive immunity- features of adaptive immunity	20/01/2025	
4	8344	Jadhav Suyash Kuber	Cells in immune system- (B lymphocytes, T- lymphocytes)	20/01/2025	
5	8345	Kamble Rutuja Vishal	Antigens: Basic properties of antigens	20/01/2025	
6	8346	Katkar Siddhi Sanjay	IgM Structure, classes and function of antibodies.	20/01/2025	
7	8347	Kukade Priyanka Sandeep	granulocytic cells- neutrophils, eosinophils, basophils.	20/01/2025	
8	8348	Mansuri Sahida Allauddin	Hybridoma technology.	20/01/2025	
9	8349	Mishra Shambhavi Mukesh Kumar	Secondary lymphoid organ- lymph node, spleen	20/01/2025	
10	8350	Mitake Komal Anil	Organs of immune system- Primary lymphoid organ- bone marrow	20/01/2025	
11	8351	Mulla Mahamadkaif Shahanul	Live attenuated vaccine	20/01/2025	
12	8352	Nayakavadi Ashiya Riyaj	Inactivated vaccine	20/01/2025	
13	8353	Patil Pradnya Rajendra	Toxoid vaccine	20/01/2025	
14	8354	Raje Shruti Sudarshan	Exogenous pathway of antigen presentation and processing	20/01/2025	
15	8355	Rathod Sonali Ramesh	Endogenous pathway of antigen presentation and processing	20/01/2025	
16	8356	Sayyad Afroja Aslam	Type I hypersensitivity	20/01/2025	
17	8357	Shaikh Ayesha Aslam	Type II hypersensitivity	20/01/2025	
18	8358	Singh Priya Gopal	Complement system- Classical pathway	20/01/2025	
19	8359	Ustad Rifat Nasirkhan	Complement system- Alternate pathway	20/01/2025	

Dr. G. K. Sontakke

HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe
Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (An Empowered Autonomous Institute)
Department of Zoology
Academic year-2024-2025

B. Sc. III **Date: 26/11/2024**
Student Seminar

NOTICE

All students of B. Sc. III here by informed that, as per part of curriculum and CIE, all have to complete their seminars for paper **Ecology, Toxicology and Aquatic Biology.** It is compulsory to deliver seminar with PowerPoint (PPT). Schedule of seminar is given below, follow the schedule, prepare the PPT for allotted topic and complete your seminar. Submit Abstract and PPT before one day of seminar to the Zoology Department.

Dr. G. K. Sontakke
HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic year-2024-2025

Date: 26/11/2024

List of B. Sc. III student and Seminar Topic- Ecology, Toxicology and Aquatic Biology

Roll No.	Seminar Topic	Topic of Seminar	Date	Signatu
8341	Abrange Vaishnavi Vinod	Types ecosystem	21/01/2025	
8342	Chougule Shraddha Shivaji	Abiotic and biotic components	21/01/2025	
8343	Dindayal Prabodhini Raju	Zonation of sea & ocean	21/01/2025	
8344	Jadhav Suyash Kuber	Food chain, food web	21/01/2025	
8345	Kamble Rutuja Vishal	Ecological pyramids,	21/01/2025	
8346	Katkar Siddhi Sanjay	Species interactions-types of interaction (competition, predation	21/01/2025	
8347	Kukade Priyanka Sandeep	Species interactions-types of interaction commensalism, parasitism,	21/01/2025	
8348	Mansuri Sahida Allauddin	Ecological succession -Types of succession	21/01/2025	
8349	Mishra Shambhavi Mukesh Kumar	Types of seres-hydrosere	21/01/2025	
8350	Mitake Komal Anil	Ecological adaptation in aquatic- animals	21/01/2025	
8351	Mulla Mahamadkaif Shahanul	Freshwater ecosystem (wetlands	21/01/2025	
8352	Nayakavadi Ashiya Riyaj	Origin and classification Ponds	21/01/2025	
8353	Patil Pradnya Rajendra	Nutrient cycling -nitrogen	21/01/2025	
8354	Raje Shruti Sudarshan	Nutrient cycling -phosphorus	21/01/2025	
8355	Rathod Sonali Ramesh	Eutrophication	21/01/2025	
8356	Sayyad Afroja Aslam	Estuaries: Characteristics & types	21/01/2025	
8357	Shaikh Ayesha Aslam	Nutrient cycling- phosphorus	21/01/2025	
8358	Singh Priya Gopal	Nutrient cycling - Sulphur	21/01/2025	
8359	Ustad Rifat Nasirkhan	Coral & coral reefs: Types		

Dr. G. K. Sontakke

HEAD

DEPARTMENT OF ZOOL

VIVEKANAND COLLEGE, KO

(EMPOWERED AUTONO

"Dissemination of Education for Knowledge, Science and Culture"
-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic year-2024-2025

B. Sc. III

Student Seminar

Attendance

Sr. No.	Roll No.	Seminar Topic	Signature Date: 20/1/25	Signature Date: 21/1/25
1	8341	Abrange Vaishnavi Vinod	V.V. Abrange	V.V. Abrange
2	8342	Chougule Shraddha Shivaji	Shraddha	Shraddha
3	8343	Dindayal Prabodhini Raju	P.R. Dindayal	P.R. Dindayal
4	8344	Jadhav Suyash Kuber	SKJ	SKJ
5	8345	Kamble Rutuja Vishal	P.Kamble	P.Kamble
6	8346	Katkar Siddhi Sanjay	Ab	Ab
7	8347	Kukade Priyanka Sandeep	PSK	PSK
8	8348	Mansuri Sahida Allauddin	M.Sahida	M.Sahida
9	8349	Mishra Shambhavi Mukesh Kumar	Shambhavi	Shambhavi
10	8350	Mitake Komal Anil	KAM	KAM
11	8351	Mulla Mahamadkaif Shahanul	Ab	Ab
12	8352	Nayakavadi Ashiya Riyaj	Ab	Ab
13	8353	Patil Pradnya Rajendra	Ab	Ab
14	8354	Raje Shruti Sudarshan	Ab	Ab
15	8355	Rathod Sonali Ramesh	Rathod	Rathod
16	8356	Sayyad Afroja Aslam	Sayyad	Sayyad
17	8357	Shaikh Ayesha Aslam	Shaikh	Shaikh
18	8358	Singh Priya Gopal	Singh	Singh
19	8359	Ustad Rifat Nasirkhan	Ustad	Ustad

Dr. G. K. Sontakke

HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

Department of Zoology

Vivekanand College,Kolhapur

(An Empowered Autonomous Institute)

Name : ***Shraddha Shivaji Chougule***

Roll no.: 8342

Seminar topic : *Innate Immunity - Cellular and Cytokine Barrier*

Immunity

The ability of host body to fight/defend against disease causing organisms,conferred by the immune system.

a.*Innate immunity* : It is an ability to fight against pathogens which is present since birth.

- It is non-specific
-1st line of defense (external defense)
- 2nd line of defense (internal defense)

b.Acquired immunity :
It is an ability of fight pathogens which is developed over a period

- It is specific and has memory
- 3rd line of defense (antibodies involved)

Non-specific defense

External defense (1st line defense) :

a. Physical barriers

b.Chemical/Physiological barriers

Internal defence (2nd line of defense) :

Internal defense prevents spread of micro-organisms in the body

-It includes WBCs, Macrophages Interferons

- Inflammatory reaction
- Fever/pyrexia
- Nk cells(Natural killer cells)

Cellular barriers (2nd line defense) :

Our body is guarded by many cells which fight against pathogens and destroy them.

- Neutrophils (smallest WBCs)
- Monocytes
- Macrophages
- Natural killer cells

White Blood Cells (WBCs) :

- Number of leucocytes increase in response to infection
- Increase in WBCs count is called leucocytosis
- These squeeze out of capillaries to fight infection (diapedesis)

[RBCs are smaller than WBCs but RBCs are not capable of diapedesis because they can't change their shape.]

1. Neutrophils

- Most abundant cells (60-65%)of total WBCs
- These stain with acidic as well as basic dyes
- Nucleus is multilobed (polymorphonuclear leucocytes)
- These are phagocytic(micro policeman of blood)
- Smallest WBCs

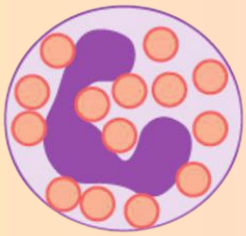


Fig. Neutrophils

2. Eosinophils

- Also called acidophils
- These resist infections and are also associated with allergic reactions.
- These are effective against large-sized parasites (blood fluke)
- Secrete histamine(chemical substance) is a vasodilator[dilate the blood vessels]

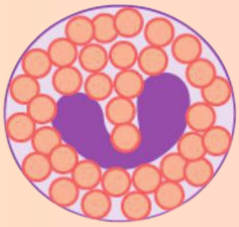


Fig. Eosinophils

3. Basophils

- least abundant WBCs
- Nucleus is 'S' shaped
- These stain with basic dyes

- These secrete :
  1. Histamine (vasodilator)
  2. Serotonin(vasoconstrictor)
  3. Heparin(anticoagulant)

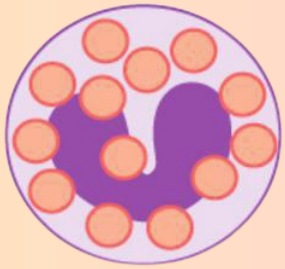


Fig. Basophils

4. Monocytes

- Also called macropoliceman of blood
- These are largest WBCs
- These enlarge to form macrophages (phagocytes)
- These function as antigen presenting cells (APCs)

Fig. Monocytes

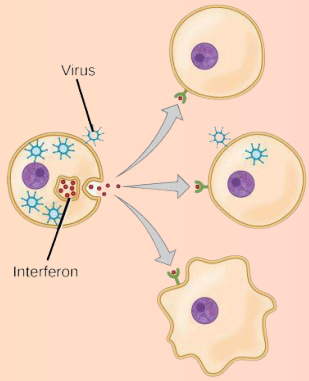
Innate immunity

Cytokine barriers (2nd line defense) :

These are the proteins which play crucial role in protecting cells from pathogens.

Ex. : Interferons (IFN) - IFN are the low molecular weight Proteins which are produced by cell infected by a virus.
Also known as biological immune response modifiers.
[Virus infected cells secrete interferons which protects non-infected cells from further viral infection.]

Interferons are cytokines that are released by a cell infected with a virus. Response of neighboring cells to interferon helps stop the infection.



THANK YOU!

"Dissemination of Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

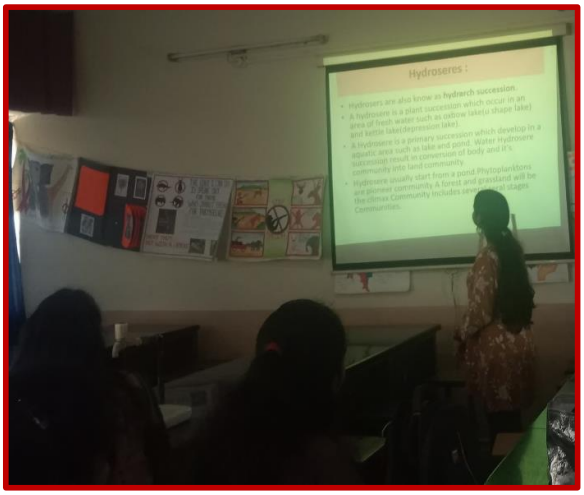
Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

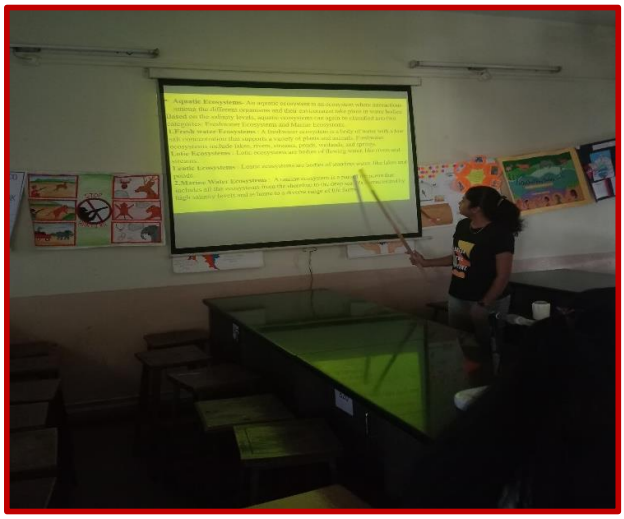
Department of Zoology

Academic Year 2024-25

PHOTOPLATE

B. Sc. III STUDENT SEMINAR





Dr. G. K. Sontakke
HEAD
DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)