

"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)



Academic Year: 2024-2025

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STUDENTS SEMINAR

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Dr. G. K. Sontakke

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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.

Signature

Dr. G. K. Sontakke

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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	Wfforge
2	8342	Chougule Shraddha Shivaji	Innate immunity -Cellular and Cytokine barrier	20/01/2025	Breadle
3	8343	Dindayal Prabodhini Raju	adaptive immunity- features of adaptive immunity	20/01/2025	Prabodhini
4	8344	Jadhav Suyash Kuber	Cells in immune system- (B lymphocytes, T- lymphocytes)	20/01/2025	Prabodhini
5	8345	Kamble Rutuja Vishal	Antigens: Basic properties of antigens	20/01/2025	Prabodhini
6	8346	Katkar Siddhi Sanjay	IgM Structure, classes and function of antibodies.	20/01/2025	Prabodhini
7	8347	Kukade Priyanka Sandeep	granulocytic cells- neutrophils, eosinophils, basophils.	20/01/2025	Prabodhini
8	8348	Mansuri Sahida Allauddin	Hybridoma technology.	20/01/2025	M.Sahado
9	8349	Mishra Shambhavi Mukesh Kumar	Secondary lymphoid organ- lymph node, spleen	20/01/2025	Shambhavi
10	8350	Mitake Komal Anil	Organs of immune system- Primary lymphoid organ- bone marrow	20/01/2025	Shambhavi
11	8351	Mulla Mahamadkaif Shahanul	Live attenuated vaccine	20/01/2025	Shambhavi
12	8352	Nayakavadi Ashiya Riyaj	Inactivated vaccine	20/01/2025	Shambhavi
13	8353	Patil Pradnya Rajendra	Toxoid vaccine	20/01/2025	Shambhavi
14	8354	Raje Shruti Sudarshan	Exogenous pathway of antigen presentation and processing	20/01/2025	Shambhavi
15	8355	Rathod Sonali Ramesh	Endogenous pathway of antigen presentation and processing	20/01/2025	Shambhavi
16	8356	Sayyad Afroja Aslam	Type I hypersensitivity	20/01/2025	Shambhavi
17	8357	Shaikh Ayesha Aslam	Type II hypersensitivity	20/01/2025	Shambhavi
18	8358	Singh Priya Gopal	Complement system- Classical pathway	20/01/2025	Shambhavi
19	8359	Ustad Rifat Nasirkhan	Complement system- Alternate pathway	20/01/2025	Shambhavi

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

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


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**B. Sc. III
Student Seminar
Attendance**

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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	S.K. Jadhav	S.K. Jadhav
5	8345	Kamble Rutuja Vishal	R.V. Kamble	R.V. Kamble
6	8346	Katkar Siddhi Sanjay	S.S. Katkar	S.S. Katkar
7	8347	Kukade Priyanka Sandeep	P.S. Kukade	P.S. Kukade
8	8348	Mansuri Sahida Allauddin	M. Sahida	M. Sahida
9	8349	Mishra Shambhavi Mukesh Kumar	Shambhavi P. Mishra	Shambhavi P. Mishra
10	8350	Mitake Komal Anil	K.A. Mitake	K.A. Mitake
11	8351	Mulla Mahamadkaif Shahanul	A.b. Mulla	A.b. Mulla
12	8352	Nayakavadi Ashiya Riyaj	A.b. Nayakavadi	A.b. Nayakavadi
13	8353	Patil Pradnya Rajendra	A.b. Patil	A.b. Patil
14	8354	Raje Shruti Sudarshan	A.b. Raje	A.b. Raje
15	8355	Rathod Sonali Ramesh	S.R. Rathod	S.R. Rathod
16	8356	Sayyad Afroja Aslam	A.A. Sayyad	A.A. Sayyad
17	8357	Shaikh Ayesha Aslam	A.A. Shaikh	A.A. Shaikh
18	8358	Singh Priya Gopal	P.G. Singh	P.G. Singh
19	8359	Ustad Rifat Nasirkhan	R.N. Ustad	R.N. Ustad


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Department of Zoology
Vivekanand College, Kolhapur
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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

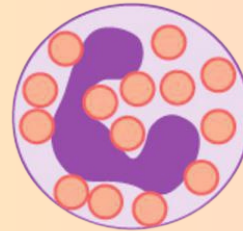


Fig. Neutrophils

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 [dilates the blood vessels]

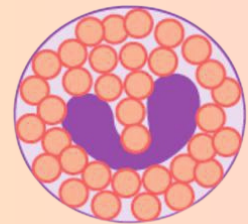


Fig. Eosinophils

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)

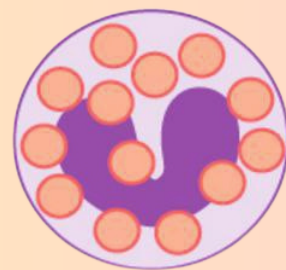


Fig. Basophils

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) :

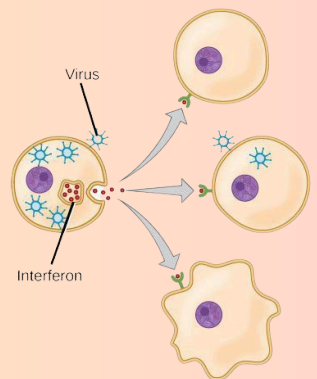
These are the proteins which play crucial role in protecting cells from pathogens.

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
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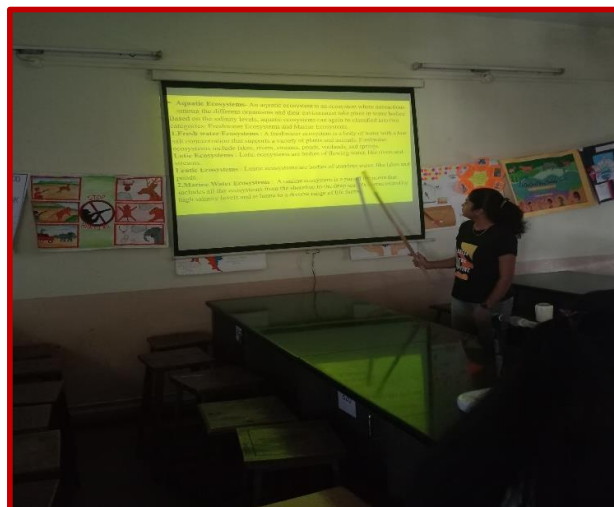
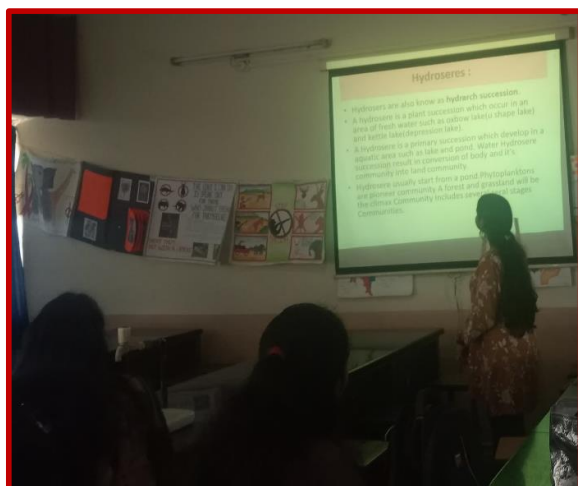
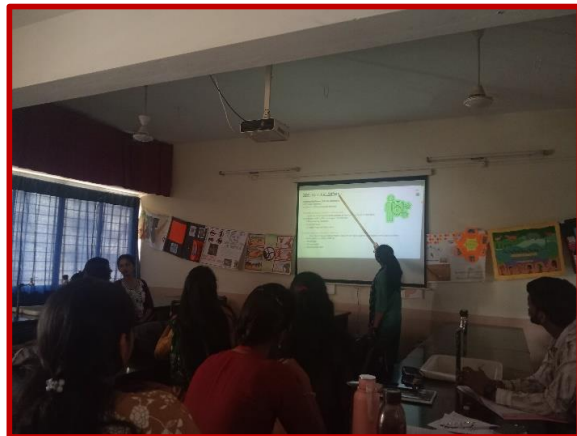
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Academic Year 2024-25

PHOTOPLATE

B. Sc. III STUDENT SEMINAR



Gita
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