

## NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Humanities and Social Sciences - NOC:Host-Pathogen Interaction (Immunology)

Subject Co-ordinator - Prof. Himanshu Kumar

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - History of Immunology - 1
- Lecture 2 - History of Immunology - 2
- Lecture 3 - History of Immunology - 3
- Lecture 4 - History of Immunology - 4 (Nobel Prizes in Immunology)
- Lecture 5 - Branches of Immunology
- Lecture 6 - An Introduction of Immune system-immunity properties
- Lecture 7 - An Introduction of Immune system-link between innate and adaptive immunity
- Lecture 8 - An Introduction of immune organs
- Lecture 9 - Immune organs - 1
- Lecture 10 - Immune organs - 2
- Lecture 11 - Immune organs - 3
- Lecture 12 - Cells of Immune System - Hematopoiesis
- Lecture 13 - Cells of Immune System - Transgenesis - 1
- Lecture 14 - Cells of Immune System - Transgenesis - 2
- Lecture 15 - Cells of Immune System and its role in Host Defense - PBMC isolation
- Lecture 16 - Cells of Immune System and its role in Host Defense - Neutrophils
- Lecture 17 - Cells of Immune System and its role in Host Defense - Eosinophils, Basophils, Mast cells
- Lecture 18 - Cells of Immune System and its role in Host Defense - Dendritic cells
- Lecture 19 - Cells of Immune System and its role in Host Defense - Macrophages
- Lecture 20 - Cells of Immune System and its role in Host Defense - Natural Killer cells and NK T cells
- Lecture 21 - Cells of Immune System and its role in Host Defense - B and T cells
- Lecture 22 - Basics of Cytokines
- Lecture 23 - Basics of Cytokines-Cytokine function and other Immune Mediators
- Lecture 24 - Inflammation and Signature of Inflammation
- Lecture 25 - Signatures of Inflammation
- Lecture 26 - Application of Interferons in Therapies
- Lecture 27 - Application of Cytokines in Therapies and Research
- Lecture 28 - Introduction of Innate Immunity
- Lecture 29 - Introduction of Innate Immunity - Physical, Bio-chemical and Microbiological Barriers

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- Lecture 30 - Introduction of Innate Immunity - skin
- Lecture 31 - Introduction of Innate Immunity - Mucosal Surfaces and Microbiological Barrier
- Lecture 32 - Concept of Pattern - recognition receptors (PRRs)
- Lecture 33 - Pattern-recognition receptors - TLRs and TLR Ligand
- Lecture 34 - Pattern-recognition receptors - TLRs Signaling and MyD88 and TRIF-dependent signalling
- Lecture 35 - Pattern-recognition receptors - TLRs and Diseases
- Lecture 36 - Pattern-recognition receptors - TLRs and Therapeutics
- Lecture 37 - Pattern-recognition receptors - RLR
- Lecture 38 - Pattern-recognition receptors - RLR Signaling pathways
- Lecture 39 - Pattern-recognition receptors - RLR associated-Diseases and therapeutics
- Lecture 40 - Pattern-recognition receptors - NLR and NLR Signaling pathways
- Lecture 41 - Pattern-recognition receptors - NLR and Diseases
- Lecture 42 - Pattern-recognition receptors - Discovery of DNA Sensor
- Lecture 43 - Pattern-recognition receptors - DNA Sensor and Signaling pathway
- Lecture 44 - Pattern-recognition receptors - DNA Sensor and Diseases
- Lecture 45 - Innate Immunity - Complement Introduction
- Lecture 46 - Complement - Classical Pathway
- Lecture 47 - Complement - Alternative and Lectin Pathway
- Lecture 48 - Complement - Regulation and Diseases
- Lecture 49 - Introduction to the adaptive Immunity
- Lecture 50 - Adaptive Immunity - Antigen
- Lecture 51 - Adaptive Immunity - Antigen/Immunogen Properties
- Lecture 52 - Adaptive Immunity - B and T cells Antigenic epitopes
- Lecture 53 - Adaptive Immunity - Antibodies
- Lecture 54 - Adaptive Immunity - Antibody types
- Lecture 55 - Adaptive Immunity - Antibody Diversity
- Lecture 56 - Adaptive Immunity - T cells and T cell-mediated Immune responses
- Lecture 57 - Host-virus interaction
- Lecture 58 - Innate Immunity during virus infection - Type I Interferon-dependent
- Lecture 59 - Innate Immunity during virus infection - Type I Interferon-independent
- Lecture 60 - Innate immune evasion by viruses
- Lecture 61 - Adaptive Immune Responses Against Viruses
- Lecture 62 - Adaptive immune evasion by viruses
- Lecture 63 - Influenza Virus and Disease - 1
- Lecture 64 - Influenza Virus and Disease - 2
- Lecture 65 - Influenza Virus and Disease - 3
- Lecture 66 - Influenza Virus and Disease - 4
- Lecture 67 - Influenza Virus and Disease - 5
- Lecture 68 - Influenza Virus and Disease - 6

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- Lecture 69 - Arbovirus and Aroboviral diseases
- Lecture 70 - Arbovirus and Dengue virus infection
- Lecture 71 - Arbovirus and Zika virus infection
- Lecture 72 - Introduction to Bacterial Infection
- Lecture 73 - Virulence factor during Bacterial Infection
- Lecture 74 - Bacterial Infection - Tuberculosis - 1
- Lecture 75 - Bacterial Infection - Tuberculosis - 2
- Lecture 76 - Bacterial Infection - Tuberculosis - 3
- Lecture 77 - Fungal Infection - 1
- Lecture 78 - Fungal Infection - 2
- Lecture 79 - Introduction to the parasite infection and Malaria
- Lecture 80 - Parasite infection - Trpanosomiasis (African Sleeping Sickness)