Basics of Immunology Part 1

This learning journey is designed to introduce general features of the immune system, types of immunity, antibodies/immunoglobulins. antigens, and The pathways of complement system and their physiological functions are also discussed in this journey.



How is the immune system organised? - the downside and the upside



Department of Pathology University of Oxford, UK

Extract from: 'Introduction to the immune system' Prof. Herman Waldmann – University of Oxford, UK 5 mins

Innate immunity vs. Adaptive immunity

The Immune System: An Overview Part 1 of 2 – Innate Immunity

Extract from: 'The immune system: an overview innate immunity'

Prof. Shiv Pillai – Harvard Medical School, USA 6 mins



Overview of innate immunity and leukocyte development



Extract from: 'Cells of the innate immune system' Prof. Kevin Maloy – University of Glasgow, UK 3 mins



Overview of adaptive immunity and antibody functions

The Immune System: An Overview

Part 2 of 2 - Adaptive Immunity



Extract from:

'The immune system: an overview adaptive immunity'

Prof. Shiv Pillai – Harvard Medical School, UK 2 mins



How do vaccines work?



Extract from: 'Vaccination' Dr. Anita Milicic – University of Oxford, UK 3 mins

How the immune system recognises antigen?

Antigen Recognition in the Immune System

Prof. Herman Waldmann Sir William Dunn School of Pathology University of Oxford, UK

Extract from: 'Antigen recognition in the immune system' Prof. Herman Waldmann – University of Oxford, UK

3 mins

Extract from:

3 mins

antibody structure'



Immunoglobulin classes and subclasses

Antibody Structure and Function

Part 1 of 2 - Antibody Structure

Dr. Mike Clark FRSB

Formerly Reader in Therapeutic and Molecular Immunology Department of Pathology University of Cambridge, UK



Antibody as an adapter molecule

Antibody Structure and Function

Part 2 of 2 - Antibody Function

Dr. Mike Clark FRSB

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Extract from:

'Antibody structure and function: antibody function'

'Antibody structure and function:

Dr. Mike Clark – University of Cambridge, UK

Dr. Mike Clark – University of Cambridge, UK 6 mins

The complement system: classical, lectin and alternate pathways



University of Colorado Anschutz Medical Campus

The Complement System An Introduction for Undergraduates

University of Colorado, USA



Extract from: 'The complement system - an introduction for undergraduates' Prof. Michael Holers - University of Colorado School of Medicine, USA Dr. Ashley Frazer-Abel – University of Colorado, USA 8 mins



Physiological functions of the complement system

The Complement System

in Innate and Adaptive Immunity Part 1 of 2 - Normal Functioning of the Complement System

Prof. Steven Sacks Director, MRC Centre for Transplantation

King's College London, UK

Extract from:

'The complement system in innate and adaptive immunity: normal functioning of the complement system'

Prof. Steven Sacks – King's College London, UK 2 mins



What are the outcomes of complement

National Institute for

activation?



Extract from: 'Hypersensitivity diseases: type II-IV hypersensitivity' Prof. Sara Marshall – Wellcome Trust, UK 3 mins